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Roger L'Eſtrang

THE ART OF Chymistry:

As it is now Practised.

Written in French
BY
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And now Translated into English,
BY
A FELLOW
Of the
Royal Society.

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The Author's PREFACE.

I Have, Courteous Reader, but two things to ſay to thee; the firſt is, To deliver my Opinion concerning *Chymiſtry*; and the other is, To ſet down my Way and Method of proceeding in Operations.

Chymiſtry, as I take it, is a *Liberal Art*, which, though it have the ſame Object, and the ſame End, as *Vulgar Pharmacy*, does

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nevertheleſs compoſe it by Nobler, and more Ingenious Means, and more to the advantage of Phyſick. In Ancient Times, even long before *Hippocrates*, Phyſitians neither knew, nor made uſe of any more than four ways of preparing their Remedies; for, either they preſſed the Juice out of their Ingredients, or beat them to powder, or they boyled them, or elſe they infuſed them in Water, or ſome other Liquor, and ſo gave them to their *Patients*. Some Ages after, and particularly ſince *Meſue*, and thoſe other famous *Arabians*, till the time of *Paracelſus*, Phyſitians continually inventing ſo many new Preparations and put ſo many Diſguiſes upon their Remedies, that they were fain to give over doing of it

them

themſelves, and to aſſign that care to thoſe whom we now call *Apothecaries*. But, if we give a Judicious Curioſity leave to pry into theſe manifold Diſguiſes, we ſhall ſoon be convinced, that they are indeed nothing but the four firſt Simple Preparations, with the addition of Sugar or Honey, and ſome differences of Colour and Conſiſtency; for the moſt part heaping great quantities of Simples one upon another, to the end their *Patients* might ſwallow them with leſs diſtaſte. *Paracelſus* and his Followers having particularly wrought upon Minerals, found out ſome excellent Remedies; and being encouraged by their rich Diſcoveries, they continued them with ſuch eagerneſs,

that in a ſhort time with Inventions equally ingenious and laborious, they did almoſt ſubdue the three Kingdoms of *Vegetables*, *Animals*, and *Minerals*, and came to the poſſeſſion of moſt rich, and hitherto unknown Secrets, inſomuch, as one may ſay, that even from the beginning of the World, to their times, the Vertues of thoſe excellent Remedies lay buried in their own Bodies, as in a Grave. This may be clearly ſeen in Crude *Antimony*, of which a pound, either in powder, or in Infuſion, or Decoction, works no other effect in the Body, than if we had ſwallowed as much Saw-duſt. But, if you know how to open its Body by the Keys of *Chymiſtry*, then for interiour Remedies,

you

you ſhall have an *Emetick*, a *Purgative*, a *Sudorifick*, a *Diaphoretick*, a *Diuretick*, and a Cordial, which you need only give in a different proportion of ſo many Grains. And for exteriour Applications, you may, out of the ſame *Antimony*, have a *Deſiccative*, a *Mundificative*, a *Conſumptive*, or *Eſcarotick*, with other rare Remedies, as we ſhall hereafter ſet down at large. If we conſider *Mercury*, they that work in the Mines in *Spain*, teach us by their Theft, that more than a pound of it may be taken inwards without harm; for, a little before they give over working, they ſwallow a good quantity of it, which, when they are at liberty, they eaſe themſelves of by Stool, and ſo keep it to ſell in ſecret. And this the Overſeers having

having discovered, do now force every Workman to stay there a considerable time, after his giving over working, that these Mercurial Thieves may be so forced to leave their theft behind them. But, if by the vertue of Chymical Dissolvants you open the body of Quick-silver, it will produce in very small Doses, such various and wonderful effects, that out of it alone, may be had Remedies to answer all the Indications of Physick. Is there any thing more contemptible than *Niter*, in the hands of the *Vulgar Pharmacy*? But, is there any thing more admirable, than the self-same *Niter* handled by *Chymistry*? for with it, we make now a pleasant and cooling *Acid*, now a hot and burning *Corrosive*; sometimes it revives the *Emetick* and

pur-

purgative vertue of *Antimony*, ſometimes it kills the *Emetick*, and revives only the *purgative*, and ſometimes it deſtroys both *Emetick* and *purgative*, and quickens either the *Diuretick* or *Diaphoretick*; and in a word, it produces ſo many wonderful effects upon all the other Minerals, that we may juſtly call it the *Univerſal Agent* of *Chymiſtry*. Who would think that a quantity of *Silver*, no bigger than a Pea Chymically prepared, were able to heal by once touching, any Ulcers of the Mouth? and by two or three touchings, ſoften & heal the hardeſt, and moſt inveterate Ulcers, and even the Gangrene it ſelf in any part of the Body, and that incomparably better than any Remedy of the Old *Pharmacy*. Would

any

any body believe, that out of *Common Salt*, which is generally reputed so prejudicial to those that are subject to the Stone or Gravel, Chymists should extract a pleasant Spirit, which drives out all Gravel, breaks the Stone in the Kidneys and Bladder, and dissolves entirely in the palm of the hand a Stone cut out of a humane Bladder?

I should be tedious in setting out all the other Wonders of this Art, only this i'le say, to prove its excellency, That whereas in its birth, and even in its growth, when it was either not known at all, or ill known by Physitians, almost every body had an aversion, and a prejudice against it; now quite contrary, being highly esteemed, and throughly known by the Learned and Experienced Profes-

sors

ſors of this Art, it has gained the Reputation of being the beſt Inſtrument of the excellent Cures they perform.

But, if in requital of the kind Reception it now meets withal in the World, *Chymiſtry* hath any acknowledgements to pay, it is particularly to *Monſieur Vallot*, who having been long the Phyſitian of the greateſt Practice in *Paris*, is now the Phyſitian of his *Moſt Chriſtian Majeſty*; in which place, by his profound Learning, and the excellent choice of Remedies, borrowed, for the moſt part, from *Chymiſtry*, he ſtill performs wonderful, and moſt ſingular Cures. So famous an Example makes me apt to believe, that if there be any perſons obſtinate in their old error againſt *Chymiſtry*, they will by little

and

and little forſake it; as thoſe have been forced to do, who for a long time ſtubbornly oppoſed the new Diſcovery of the Veſſels that carry the Chyle from the Stomack to the Heart, without coming at the Liver, only becauſe they had not ſeen, or at leaſt not well obſerved this new conveyance.

Now for my Method, it all runs upon two principles; *Firſt*, To find out, and ſet down ſolid and pertinent Reaſons of all the Circumſtances which accompany our Operations. The *Second*, to diſcover the beſt, eaſieſt, and ſhorteſt way of performing the ſaid Operations. Theſe were no eaſie things to be found out; for, the firſt Chymiſts happened upon abundance of excellent Secrets, but being ignorant of the true Reaſons of their Diſcovery;

very; that they might give credit to their new Science, they made uſe of the Cabaliſtique Cloak, of covering all things with a Myſtery. The Modern Profeſſors indeed have given a better Foundation to their Art, and ſo good an one, as hath ſhaken that of the old Philoſophy, but withal, either for want of skill, or maliciouſly they have encumbred their proceſſes with ſo many, and ſuch impertinent Circumſtances, lengthening both them and the expences, that very few, and indeed none, but very ſharp-ſighted Phyſitians have been able to ſee through the Cloud, and both receive and communicate the benefit of the light there hidden. This conſideration has moved me in this my Work, to keep within the limits of *Chymiſtry*, neglecting any Spe-

Speculations beſides my purpoſe; and withall, to endeavour to free my proceſſes from all thoſe Obſcurities, Difficulties, and Protractions, which Experience and Reaſon have convinced me to be either ſuperfluous, or prejudicial to them. If I have not executed my deſign to thy mind, I muſt confeſs, Courteous Reader, that it is much a harder thing to perform well, than to project.

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THE

THE ART OF CHYMISTRY, As it is now Practiſed.

Of the Chymical Laboratory.

THe *Chymical Laboratory* is a place fit to perform the Operations of Chymiſtry, which cannot be done without great preparations, experience, induſtry, and skill.

The *Chymical Laboratory*, requires of it ſelf three Conditions: *Firſt*, there muſt be a Chimney in it for thoſe Proceſſes, where ſome unpleaſant and noiſom ſmoaks are to be avoided: *Secondly*, The Room ought to be clear and light, that one may ſee diſtinctly, even the bottom of the Veſſels, the divers changes

that do happen, and which sometimes, in so
choise and important operations, ought to
observed with a great deal of care, that one m
either augment or diminish the heat, as neces
shall require. *Thirdly*, The place ought to
so capacious, as that in one part may be the Fu
naces, in another the Vessels and Utensils, and
another your Auditors or Spectators; and yet
the middle there may be room enough
for the Artist to mind his Operations, and best
himself.

Of the Chymical Instruments.

THe *Chymical Instruments*, with which a L
boratory ought to be furnished, are of t
sorts: for some are *Principal*, the oth
less-principal.

The *Principal* Instruments without which
Operation can be done, are, the *Lute*, the *Fu*
ces, the *Vessels*, and the *Fire*.

The *Less-principal* are those that serve so
times for one Process, sometimes for anoth
towards the facilitating of them; and are
great number. But I propose only *Thirty*
of the most useful: *viz.* an Iron Ladle, a li
Iron Barre, an Iron Spatula, a great Stick
brass Mortar and Pestle, a Marble-Mortar, w
a Woodden-pestle; a Plate-dish of white wa
with a Glasse-pestle, two pair of Scales
Weights; a Marble or Porphyry-stone to gr
u

pon; ſome Pack-thread, white and brown Paper, tarch or Glue, a fine Sieve; ſome old Linnen-ags cut out into long ſlices, ſome Aſhes, ſome and, ſome Tiles, ſome water, a Tin-Mould n form of a Pipe, an Iron mould for Piſtol-Bul-ts, a Copper-mould for a Goblet, a little Trevet, Woodden ſpoon, a Tinn-Tunnel, Rols ſtuft ith Straw or Chaff, or made of Paſte-board, a Mould for Bricks, a Fire Shovel, a pair of Tongs, nd a pair of Bellows; Of theſe we ſhall not reat here particularly, but as occaſion ſhall ſerve the Operations where they ſhall be imployed.

Of the Chymical Lute.

TO make a good Lute for all the purpoſes of Chymiſtry, take of Potters-Earth, of white yellow Sand, and of Horſe-dung, an equal antity, not an equal weight; mingle them, d moiſten them by little and little with water, ſt working them together with your feet upon e ground, then piece by piece kneading of them actly with your hands upon a Table, till you ve ſo incorporated your Ingredients, that they e not diſtinguiſhable from one another; then ake them up in form of Bricks, that ſo you ay uſe them more neatly; keeping them from re and Sun, leſt they ſhould be over-dry and rd. The Potters Earth is made uſe of becauſe its unctuoſity, which makes the Lute leſs ittle; the Sand is employed to bind the Potters

Earth from cracking, and flying, and burning
dust. (And some do use powder'd Glass for t
same end.) The Horse-dung is added, becau
being full of little Straws well grownd by t
Horses Teeth, they do serve for the firmer kni
ting of the matter together. (And so some u
Calves Hair for that purpose.) Finally, the W
ter incorporates these three things together;
the place of which, some use the Whites of Eg
which by their sliminess make a stronger cong
tination of all the Ingredients.

This Lute serves for six uses; 1. To ma
Bricks. 2. To lute and cement the Bricks
your Furnaces. 3. To fill up the cracks and s
of your Furnaces. 4. To frame little Rounds li
Salt-sellers to set the Retorts on. 5. To lute
vessels both of Earth and Glass. 6. To repairs t
cracks of your Vessels. Now because there i
peculiar industry in well forming the Bricks a
Salt-sellers or Rounds, and in luting the vess
I shall here set it down at length.

Our Bricks are all of a bigness and proporti
that so our Furnaces may be the more even a
firm, and the easilier built, even without
ment: Moreover they are almost in the shap
a half Moon, that they may make the Furn
round; that figure being the fittest to gather a
concentrate the heat. Therefore we form
Bricks in a woodden-mould either of Box
Guaiac, or some such hard wood. The piece
wood is a foot long, half a foot broad, and th
inches thick. In its middle there must be a h
low or overture drawn from a Round made w

a Compass; which Overture ought to be eight inches outwards, six inches inwards; three inches large, and three inches thick. Now to make your Bricks, fill your mould with lute, and, with a woodden knife eeven the superficies and so knock out your Brick; and when your mould grows durty, rub the sides of it with sand; dry your Bricks in the shade, so they will last longer; for being thus half-dried they will bake leasurely in the using of them, and not be apt to crumble and break, neither will they be so soon Calcin'd as if you had dryed them by the fire or Sun, or in a Potters Oven.

Our Rounds, or Saltsellers, derive their name from their figure because they are somewhat like the old-fashioned Saltsellers. To form them, take of our Lute a quantitie as big as your fist, and rowling it between both hands, reduce it to the form of a Cylinder two inches high; flatt the lower end of it upon a Table, and then with your fingers sinck in the upper part, till it be somwhat like a Saltseller that is hollow, and of the bredth of an inch in diameter.

For the luting of your Vessels, the Lute that is employed ought to be softer than either for Bricks or Rounds, and therefore you'l do well to wet it with some Water. It must not be laid in thicker than the thickness of a half Crown-piece; for if it be, the fire will scarce be able to heat the Water contained in your Vessels. Observe that sometimes the Matrasses are luted up to the neck: sometimes half-way. Retorts are luted in the same way too; only there

ought to be a little space left near the neck, th
one may see thorow it into the vessel in t
time of the operation: Your vessel being lute
must be dried at leasure in the Sun or shade,
near a gentle fire; taking care to turn the
equally, so that they be not dried more in o
place than in an other.

Of the Chymical Furnaces.

Our *Furnaces* are round and little: They a
round, that they may unite and conce
trate the heat of the fire; they are little, t
our Laboratory may not be incumber'd to
purpose, and also that we may give our ves
a quicker and more equal fire, and that with
toyl and less expence.

We have two sorts of Furnaces: the first
fixt, which are made of different layes of cro
ed Briks, cemented strongly together with
Lute; the others are movable and consist
crooked Bricks layed one upon another with
any lute or cement, and in which you lay
fire, not under your vessels as in the
sort of Furnaces, but circularly round ab
them.

The fixt and cemented Furnaces are *five*
number, to wit; the Furnace with a heat
Balneum muris, or of the vaporous Bath; the F
nace with the heat of ashes or sand; the F
nace with a naked fire and circular heat; the F

ace with a naked fire and small Reverberation; nd the Furnace with the fire of great Reverbera- ion. The moveable and not cemented Fur- aces are likwise *five* in number; *viz.* the Fur- ace with a small circulatory fire; the Furnace with a great circulatory fire; the Furnace with fire of circulation and suppression without a gape; the Furnace with a fire of circulation and uppression with a gape; and the Furnace with moulting fire or the wind-furnace: All these five urnaces are with a naked fire.

The Furnace with the heat of *balneum maris*, or he vaporous Bath, is necessary for the gentle di- tilling of all sorts of aery or sulphureous liquours n glass-bodies, placed in a Cauldron full of water; and withall, it serves to evaporate and dry, by its gentle heating vapour, all extracts, and salts, in little earthen glaz'd dishes, which are set upon the Overtures made in the cover of he said Kettle or Cauldron; so that the remedies hus dryed have no odour nor taste of Empy- reume or burning.

For the building of this Furnace, do thus; lay oneRound of our Bricks of such a compass as may e proportionate to the greatness of the Kettle you intend for your *Balneum*, leaving an empty place before, four or five inches broad for the ashes-hole; then lay another entire Round of Bricks upon which place your Grate; then upon this lay two Rounds more, leaving before an empty space for your fire dore, as you did for your ash-hole; and then add four entire Rounds, for your Laboratory, leaving in the uppermost of

them three little jams or gaps each an inch wi to let in the air; *viz.* one before, above the fir dore; another behind, over-against to this fir and a third on the side, which shall be oppos to that where the Receiver is placed, lest if the were one on that side, the flame might som times break the Nose of the Limbeck.

Now for your Kettle or Cauldron, it mu have a brim of an inch broad, whereby it may b scituated and equally suspended upon th brims of your Furnace, leaving betwixt it an the Furnace-sides an orbicular space of an inc to give the fire play round about it, that so may heat equally the matter contained with in it.

In the Fabrick of this Furnace, as likewise i the structure of the four following, observe:

1. That you must not forget to put a sufficien quantity of Lute under, above, and betwixt you Bricks, that they may be strongly cemented to gether. 2. That you must not place your brick just one upon another; if so your Furnace wi not be firm and stable, but by the operation o the fire will soon cleave asunder. Do there fore as expert Brick-layers, and interlace you Bricks one with another.

The Furnace with the fire or heat of sand o ashes, is useful for the distillation, and rectificati on of all sorts of liquors drawn from Vegetals Animals, or Minerals, in glass, or earthen bo dies, glazed with their glass heads, and also for all infusions, extinctions, tinctures, evapo rations, &c. made in Cucurbits, Matrasses dish

diſhes, pans of glaſs, or glazed earthen ware.

This is the hardeſt to be well built of all our Furnaces, and, for the building of it, do thus; firſt make a ſufficient quantity of Mortar, conſiſting of our Lute, Water, and Plaſter of Paris in powder; then with little tiles make upon a floor, an Oval of one foot in length, and of eight inches in breadth; cement your tiles well together with this mortar, which becauſe of the plaſter will render your Furnace more firm & durable; raiſe this firſt Oval Lay of tiles to the height of two inches, leaving a ſpace for your aſh-hole; then add one lay of our bricks, not filling up the ſpace left for the aſh-hole, becauſe it muſt he almoſt as high as the ſpace to be left for the fire-room; upon this lay of Bricks, place your iron-barrs for a grate in the ſame diſtance, as they are ſet in chafing-diſhes, placing one little barr upon the aſh-hole dore, not forgetting to beſtow good ſtore of mortar both above, under, and betwixt your Bricks and Barres: then upon ſo much of this Furnace as is already built, place ſmall tiles cementing of them together in ſuch an order, as may make this Furnace acquire a ſquare figure outwardly, which will make it more ſolid and firm; and by adding to it a conſiderable thickneſs, fit it for the conſerving of an equal heat with a few Coals. Upon this firſt lay of bricks (which have in the inſide an oval figure though the Tiles hanging over on the outſide form a ſquare one) place another lay of Bricks leaving a convenient ſpace for the fire-room, which muſt be ſomething higher than it is broad: but obſerve

serve that in this Oval lay must be employed mo bricks than in the other, because your Furna by little and little must acquire a greater ci cumference towards the top; then build up wi little tiles and mortar, your square outside to th height of your bricks, so continuing as you bui up your Furnace: upon the top of the fire-roo lay a little iron barr, then add another enti round of Bricks without any overture, only little chinck in the backside of your Furnace ove against the fire-room, of two fingers bredth give the fire air; and this Circle must be in ci cumference wider by two inches than the las smoothing with mortar the inside of this roun that the fire may be carried more eevenly up wards: this done, place on this last Round square Iron plate all of a piece (or of two piec if you will, sawdering them well one upon an other); the place must not be thicker than a shi ling, that so the fire may the easilier penetrate an give a moderate heat to the sand; then with ou Mortar raise on the inside a Square of an inc thick, to all the four sides of the Furnace, t make a place to put your sand in, or ashes i you will: ashes give not so great a heat as sand whensoever you desire to moderate the hea of either, you may wet them with a little wa ter.

The Furnace with a naked fire and circula heat, serves to distill *Aqua vitæ*, spirit of Wine Aromatic and Balsamic essences, and also th waters of all Plants: in the Brasse-vessel, calle *Vesica*, with its Helm or Moors head, borde

wit

with a refrigeratory of the same metal, making use also of a long pipe of the same matter which passes through one or two great Hogs-heads full of water near the Furnace; and which are instead of a second & more powerful refrigeratory.

For the building of this Furnace, do thus.

First, take your Brass Vesica, set it upon the ground where you intend to erect your Furnace, then lay a Round of Bricks well cemented with your Lute, so that there be half a fingers bredth left betwixt your Vesica and the Bricks, and an Overture for the ash-hole; then taking out your Vesica, add another Round of Bricks, leaving still room for the ash-hole; which will be about half a foot high: upon these two layes place a Grate of divers little Iron-Barrs; then add an entire Round of Bricks, to which add two more but not entire, leaving a space empty for the fire-room perpendicularly over the ash-hole; then add one circle of Bricks entire, without any overture, upon which place two little iron-barres to uphold the bottom of your Vesica. And in this place is terminated the heighth of your fire-room, which is once again as high as your ash-hole. After this raise by Rounds your Furnace, till you have brought it as high as the neck of the Vesica; which that you may the better doe, place your Vesica upon its two barrs, and so it will serve for a measure, to the elevation your Furnace ought to have.

Observe, that this Furnace is not to have any chink on any side whatsoever; but every where, and particularly in the Laboratory, there ought

to

to be circularly halfe a fingers breadth left empty that so the air compassing the vessel may draw the heat upwards, in all the circumference of the Vesica. And this environing heat carries the Spirits from the bottom of the Vessel to its neck, from whence they are raised all together to the top of the cover or Moors head; and if above you stop this empty circumference, your fire will be apt to go out, if it be not excessive great which also would be inconvenient, because it would consume, in vain, great quantity of fewel.

The Furnace with a naked fire and small reverberatory serves to distill the Phlegm, the Spirit, and the fœtide Oyle, of Berries, Woods, Barks, and Roots, in an earthen, or glass Retort well luted lest it should break in the fire: For the building of this Furnace, you must first consider of the bigness of the Retorts, you ordinarily intend to make use of; and make the circuit of your Furnace so wide, as there may be a finger breadth left betwixt it and your Retort. Lay then four ~~hundred and~~ five rounds of Bricks in the said proportion, leaving an empty space for your ash-hole and fire-room; they being not to be separated in this Furnace by a Grate, because else the air comming in at the ash-hole and meeting with the fire upon a grate, would kindle it too violently, and so great a fire is not requisite for these substances to be distilled. Then add an entire round of Bricks, upon which place two Iron Barrs, upon which you must put the cover of a Pipkin turned with its hollow part upwards, which must be filled with sand to receive the bot-

tom

om of the Retort: then with divers rounds of rick raiſe your Furnace to the heighth of the Re-ort, or higher; taking care to leave an overture, or pen ſpace, to paſs the neck of the Retort; which hink you muſt afterwards with our Lute re-air under the neck of your retort, to hinder the ame from paſſing that way, and endangering the reaking of the Veſſels. Having fitted a Recipient o it, you muſt lute both their necks together, ery cloſe, to the end that nothing of the ſpirits xhale & ſcape that way in the diſtillation: Laſt of ll, you muſt have an earthen Pan of the capacity f your Furnace, which may cover the top of it, nd reverberate the riſing flame upon the Retort; nd this Pan muſt be of glazed earth, elſe it would fly in pieces in the heat: beſides, it muſt ave a hole in the middle of its bottom, of the big-neſs of an Egg, and this to give the fire air which lſe would be ſtifled, and go out.

The Furnace with a naked fire, and great Re-verberatory, ſerves to diſtill the acid, and cor-roſive ſpirits; the acid black and corroſive Oyls in a glaſs, or earthen luted Retort, or in an iron one. To build this Furnace, you muſt conſider of the bigneſs of the Retorts, you mean to employ, and doe as above in the little reverberatory-Fur-nace: then make an aſh-hole covered with a grate, and a fire-room covered with its two Iron barres; and at laſt, a Laboratory of the elevation of the belly of your Retort, as has been ſaid already; only you muſt on the top of the Laboratory leave a chink on one ſide of the aſh-hole, and fire-room, of two Bricks in height, to paſs the neck of your Retort.

Before

Before you place your Retort upon the Iro barres, you must provide a little earthen cov with ashes, as has been said in the first Furnace this kind. Then place your Retort, and fit it a large Recipient, which must be also setl with great care upon a little jont-stool, and und it must be either Paper, or Linnen, or some so thing, that it may rest gently and surely upo Then with our lute, fill up the space you left f the neck of the Retort, for the Reason alledg in the precedent Furnace, luting also the co junction of the Retort, and its Receiver togethe this being done, there remains to make a Reve beratory, which may reflect, and beat back, t rising heat, upon the Retort: and to this effect, l five rounds of moveable Bricks, that is, witho Mortar, or Lute; only one upon another, in suc a manner as your Rounds go alwaies in diminis ing; so that in the first you employ half a Bri lesse than in the last, cemented round; and the second, a whole Brick less than in the fi moveable Round; and in the third you mu employ two Bricks less than in the secon leaving a hole in this last Round, whic you shall fill up with pieces of Iron, of suc a bigness, as shall not slip betwixt the space th is left, between the Retort, and the wall of th Furnace: The reason why I put Iron, rathe than Bricks or stone, or any other solid thing is, because at the end of the operation you'l fin an excellent *Crocus astringens* of Mars, red a scarlet, and which will stick to the superficie of all your pieces of iron.

Th

The Furnace, with a little circulatory fire, or *Ignis rotæ parvus*, ſerves to evaporate the diſſolutions of Minerals, as alſo of Animals & Vegetals, by a gentle ready heat in a Matraſs, either luted, or not luted. This Furnace is made of one only round of our Bricks, cloſe ſet together without any Lute or Mortar: you muſt place a Round or Salt-ſeller of Lute in the middle of this Furnace; and upon this Salt-ſeller, filled with ſand or aſhes, place your Matraſs ſtraight, leaving a circumference of two inches between your Matraſs, and the Furnace ſides; then put your Coal, ready kindled, into this ſpace, approaching your fire nearer to the Furnace than to the Matraſs.

The Furnace, with a great circulatory fire, ſerves to ſublime all ſalts drawn from metals and minerals in a luted glaſs Matraſs. This Furnace is made of two equal Rounds of our Bricks, ſo ſet together without Lute, that there is a little diſtance betwixt them, to the end that the Air, entering at theſe ſmall overtures, may ſerve to keep the fire alive: place your Salt-ſeller, and upon it your Matraſs, then your Coals, as we have ſaid in the precedent Furnace.

The Furnace, with a circulary fire, and of oppreſſion without any chink; is uſeful to calcine, and melt down all ſorts of Minerals, as alſo thoſe Animals and Vegetables that require Calcination, either in a Crucible, or a pot of Earth unglazed: To build this Furnace, lay firſt upon the ground either a large Salt-ſeller of your Lute, or two Bricks, and upon them your crucible

crucible or pot; then raise divers rounds of
Bricks without Lute, till they come two or th
fingers above your pot, leaving in the first rank
interval of a fingers bredth betwixt the Brick
but in the last *row* they must be joined very clo
together: leave also betwixt your Crucible, a
the Furnace-sides, a space of two inches bro
which must be filled with Coals up to the top
the Furnace: and from thence this fire is calle
a fire of Suppression, because the coals are n
only under, but circularly above, and on the sid
of the Vessel; and besides, very often we cover t
whole pot with coles.

The Furnace, with a fire of suppression, wi
a chink, is for the distillation of Oyles, and Spiri
a nd Phlegms of all sorts of resinous Gumm
and waxe, in a Glass Retort well luted; It
made as the precedent, only there ought to
in the two last rounds of Bricks a chink, gap,
overture for the neck of your Retort to pa
through, which must be set, and compassed wi
Coals, as has been said.

Observe, That in placing your Retort, eith
in this Furnace, or any of the small or great R
verberatories, there are three things to be take
notice of. 1. That the body of the Retort, tou
the Bricks of the side, that the Chink is in su
a manner as the whole neck may hang out at t
Chink, lest otherwise the fire should break i
2. That the neck of your Retort hang dow
wards, that the liquour may the eatilier r
into the Recipient. 3. That the end of the ne
of your Retort enter into the middle of your R
cipie

ipient, for fear the vapours received should ind some passage, even through their luted con-unction.

The Furnace, with a melting-fire, or the Wind-Furnace, to melt the hardest bodies; as Gold, Glass, Stones, in a Crucible, or unglazed Earthen ot: and it is thus made.

Take two Loggs of Wood, or two great tones, half a foot high; a Barrel knock'd out t the lower end, and having in the other a hole s big as a mans head, then set this Barrel upon he Stones or Logs, and having laid a Grate up-n the uppermost hole, cover all this top with our ute, and Plaster together; and upon this erect a ovable Furnace, with the fire of suppression, ith our Bricks, as it has been said before. The ir coming in, with violence under the Barrel, oes so blow and light the Coals, that it produ-es a heat incomparably greater than any o-her.

Of The Chymical Vessels.

The Kettle, or Cauldron, serving for the *Balneum Mariæ*, or Vaporous Bath. This Ket-e is of the same matter and form as ordinary ettles are, that is, Brass: it must have no Bail, ut round about it a brim of an inch broad, by hich it is to be suspended, upon the brim of the urnace; this Kettles cover must exactly fit it, nd have five round holes; whereof the middle-

most must be the biggest, and capable of the b
tom of a *Glass-Cucurbit*, or Body, with its he
the four other are less, and for little dishes
Earth, or Glass, in which Extracts, and Salts
to be dryed.

The Vesica, or Copper-body, cover'd with
Moors-head, and bordered with its Refri
ratory, serving to distill *Aqua vitæ*, Aroma
and Balsamic Essences, Waters, and Spirits
Plants.

This Vesica ought to be of Copper; not tin
within, and somewhat round bottom'd: it ou
not to be thicker than a shilling, of one foot
a half high, and one foot broad in diamet
in its top it must be a little Convex, not in fo
of a Pear, as they ordinarily make them;
this, that it may repercute the phlegm of *A*
vitæ, and the Essences. From the middle
this top, rises a neck four inches high, and th
in diameter below, but four inches abo
whose use is, to make the Cover of the Ve
enter easily, and stick faster, and so you see that t
Vessel is not unlike a Hogs-bladder; on one s
of the top, rises a little pipe two inches high,
half a finger wide, by which, with a Tin-tunnel
put in again the first Spirits of Wine that co
a little muddy, because they have carried alo
with them the smoot adhering to the condu
of the Alembic: its cover is of Brass, and Consi
of a neck half a foot deep, three inches large at
top and bottom, but four inches in the midd
because within it, must be five or six Spun
so fastned with cross-sticks under and over th

s to be kept from falling [illegible]n into the Veſica, nd from riſing up into the head: their uſe is, o draw to themſelves the ætherial Spirit of the *Aqua vitæ*, or Brandy, and to hinder the phlegm which in the middle of the operation riſes with the Spirits) from paſſing any farther: for, he Spirit being thin and aery, eaſily makes way, where the groſs phlegm cannot; which there- ore falls down again into the Veſica: This neck s terminated in a round Ball, not unlike a hu- man skull, and is therefore called the Moors- ead, from whoſe middle is derived a Pipe a foot ng, and in diameter an inch wide, which goes hrough a Cauldron or Kettle, ſawder'd round bout the Moors-head, and which muſt be of ſuch proportion, as to contain a pale of water, hich is poured in the Operation, cold, to he end that the Vapours that are in the Moors- ead may be ſoon condenſed, and diſſolved into quor. This Cauldron is therefore called a Refri- eratory: on one ſide of the brim there is a little ock, wherewith to empty the water, if it grow o hot, and when the operation is ended. The ttle moveable neck, by which the Pipe com- g from the Moors-head, muſt be joyn'd with the ng Pipe that goeth through the Hogs-heads, ught to be half a foot long: the long Pipe which ſſes through the Hogs-heads, muſt be of Braſs, d ſix foot long, one inch wide in diameter, by ttle and little diminiſhing, as it comes nearer e end: This Pipe goes through two Hogsheads, tuated cloſe by one another, by four holes, ſo ade, that the Pipe entring almoſt at the top of the

neareſt, runneth down a-ſlope, to come out at the laſt hoop of the furthermoſt; afterwards the circumference of theſe holes muſt be ſtrongly lute then fill with water your Hogs-heads, which will be another ſtrong Refrigeratory, and by condenſing the Spirits and Vapours in their way make copious diſtillation in a ſmall time.

The open Limbic is made of two differe pieces, *viz.* of a Body or Cucurbit, and Head. The body may be of Glaſs, Stone, Earthen glaz'd ware, or of Braſs: it is alwa higher than it is broad; broader in its mid than in its bottom, and broader at the bott than at top, and round in all its breadth, by wh deſcription you ſee that it is not unlike a Gou The head may be of the ſame matter as the b dy, and ſometimes of Lead; the top of it in form of a point, the bottom is broad and portioned to the body. In its lower part, it h a brim inwards, on which the Vapours that in it fall, and gently diſtill to the Noſe of Pipe, which is of half a foot long, and conv the liquors into the Receiver.

Theſe two Veſſels, fitted one to another, ſe to diſtill, and rectifie in a ſand-fire, *per aſſenſ* the waters of Plants, *Aqua vitæ*, Spirit of Wi the phlegm Oyl, and Spirit of Vegetables Animals, and to rectifie the Phlegm and Spir Minerals. Before you put your Cucurbit the ſand, you muſt lute two or three ſlice white Paper upon the neck of your body, tha you may even it, and make it fit for the h which muſt ſit cloſe: upon theſe ſlices of P

ound about the Glass-[illegible], tye a pack-thred with a loose knot; then with more Paper lute together the head, and its body over this pack-hred: the use of which, will be to undoe easily hese Vessels, one from another, by drawing the ack-thred, and so breaking the Papers, when the peration shall be ended.

If you expect not a considerable quantity of quor from your matter, then make use of a mall Receiver, which you may hang to the Nose the Limbic, by a packthred fastned to the little utton that is on the top of its head; but, if it e big, and you hope for much liquour, then lace it carefully upon a little Stool, or upon ricks, laid one upon another.

Blind Limbicks are made of a Cucurbit, and s head, sealed hermetically to it, of the bigess of ones fist: in the top of the head there is little hole, fit to receive the small end of a unnel, by which the Liquours are poured into is Vessel, and in the lower part of the head, ere is a nose by which the Liquours distil. Its e is, to rectifie the acid Spirits of Minerals, egetables, and Animals, so that nothing be lost, r exhale from them; and therefore you must efully stop the hole, by which you put in ur matter, with a glass or cork stopple.

Twins or Pelicans are two blind Limbicks, hose noses are reciprocally inserted into the odies of one another: they must both have a hole the top, for the use mentioned in the other: ey serve to fix and circulate the Oyls, and irits, with their Salts, of Animals, Vegetables d Minerals.

The Retort is a [illegible]de up of a great belly or ball, and a long bending neck, which near the belly is six or eight inches wide, but diminishing, still grows less, till its end be but wide enough to put your finger in; it serves to distil by the side of the Furnace, and ordinarily in naked circulatory fire, the black Oyls, and Spirits of Minerals and Metals, and the stinking Oyls of Vegetables and Animals.

The Iron or Earthen Retort, is like the Glass one; only the neck is three inches diameter near the belly, and two inches in its extremity to the end, that gross and heavie ingredients may the easilier be put in: it serves to distill the Spirit, and stinking Oyls of Woods, Barks, Roots, and Berries.

The Matrass or Bolt-head is alwaies of glass and may be of different sizes: it consists of a round bowl, convex in its bottom, with a neck half a foot long, or thereabouts, according to the bigness of the body; the neck is everywhere an inch wide: it serves to sublime Mercury, and divers Salts.

The Recipient is a Matrass of any bigness whose neck must be broken off four fingers breadth, near the belly; to the end that the extremity of the neck of the Retort may enter to the middle of the body of the Receiver: it serves to receive Waters, Essences, Oyles and Spirits of Animals, Vegetables, Minerals and Metals.

The way to make a Recipient of a Matrass is this: Heat the neck in that part where you

tend to cut it off, and ... very hot, wet it, and so knock it with a hammer, and it will break there where it has been wet; if it be not very even, you may with a key even it by little and little.

The Stone, or Earthen Receiver, is of the same figure, with the glass one, only it has a wider neck to receive the Nose of the Earthen Retort; you may use an Earthen Pitcher, if you cannot get a fit Receiver, so the neck of the Pitcher be straight, and the belly big and wide, taking care to lute it close with the Retort: but these Earthen Receivers are seldome used, except it be to receive the Spirits, and stinking Oyls of Wood, Rinds, Roots, Barks and Berries.

The double Vessel in form of a Matrass, is a Matrass with a long neck, into which is inserted the neck of another Matrass of the same bulk; in the Ball, though its neck be a little less, and may, if you will, also be shorter, and go but half way into the first Matrass; you must lute with three or four slices of Paper the junction of these two Vessels, that nothing may exhale: it serves to extract by Infusion in a sand-heat, all sorts of Tinctures.

The double Vessel, in form of a Cucurbit or Body, is a Cucurbite of Glass, or Earth, upon whose mouth you place a cup like your Cupping-Glasses, with the mouth downwards; it having a little brim, by which it is suspended upon the top of the Cucurbite: these two Vessels must be close luted together. The best Lute will be of Flower, or Starch, in form of a hasty Pudding.

This Vessel ser[illegible]ract by infusion t[illegible] tincture of Aromatic Flowers, that so nothi[illegible] may be lost of their Spirit, and is fitter than t[illegible] Pitcher ordinarily used to this purpose.

The Bell is a great Glass-Vessel, like the Bell th[illegible] Gardiners use to cover Melons withall. Th[illegible] use of this, is, to draw the Spirit and Oyl o[illegible] Sulphur, of salt Armoniac, of Antimony, an[illegible] Mars, or Iron, by covering with it an Earthe[illegible] Pan; and if you turn it with the mouth up[illegible] wards, it serves for precipitations, and washing[illegible] or lotions.

The Glass-Tunnel, though it be open at bot[illegible] ends, yet we reckon it among the Vessels; as wel[illegible] because sometimes by stopping the little end, it i[illegible] really one and, contains Liquours, as becau[illegible] there is something worth observation in its F[illegible] brick or making; it must have a straight lon[illegible] neck: because being used in the blind Alembic, [illegible] must reach as farr as within the Body, and no[illegible] spill upon the inward brim of it; it must not ha[illegible] so large a belly as the Tin-Tunnels, lest when yo[illegible] parate your distilled Oyl from their Phleg[illegible] and Spirit, much of the Oyls be lost by sticki[illegible] to the large sides of your Tunnel. It serve[illegible] to separate the Oyl from the acid Phleg[illegible] distilled with it, which is done by lett[illegible] these two Liquours settle in the Tunnel, an[illegible] then taking away your finger which stopped i[illegible] and giving leave to that Liquour which is lo[illegible] ermost to run out; which done, stop again t[illegible] neck of your Tunnel, and let the remainder [illegible] your Liquour run into another Vial. It may [illegible]

ined with a cornet of brown Paper through which are filtrated Lixiviums, Waſhings, and diverſe other things, and may alſo ſtand you in ſtead of a Tin-Tunnel.

The Crucible, is a pot; of which there are of different ſizes. It is made of the ſame earth as white ware; it is round without a handle very narrow at the bottom, and wider and wider towards the top: it has a little Sinus or Cavity, by which the thing melted is poured out: it ſerves to calcine and melt Minerals and Metals, eſpecially in a ſmall quantity.

The Camion, is a Pot like an ordinary Chamber-pot with a handle to it. It is made of Potters earth, and Sand; and therefore it holds out ſtrongly in the fire, which your Pots made of ordinary earth do not, but fly; There are two ſorts of theſe Pots, ſome are glazed, or leaded, and theſe ſerve to Evaporate and dry; ſome are un-glazed; and they ſerve to melt and calcine Minerals, and Metals, and every thing that needs ſuch preparation, eſpecially if you have a great quantity to prepare, theſe Camions being bigger than Crucibles.

A Pan is an Earthen Veſſel ſtraight-bottom'd, and flat and wide-mouth'd. There are two ſorts: Glazed that ſerves to vaporate in a naked fire Extracts, Syrups, Pills, Plaſters, &c. and Unglazed ones, which ſerve to evaporate in a Bath, or ſand heat, Salts, Cryſtals, &c. and to waſh ſalt Remedies.

In ſome of our Operations, we make uſe of Utenſils of the Kitching; as Frying-Pans, to make

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the Oyle of Eggs; Kettles, and Brass Basins, to congeal the Crystal Mineral, and make our Cauteriums.

Of the Chymical Fire.

IN the governing of a Chymical fire, there are four things to be considered. *viz.* 1. The materials of your Fire; 2. The interposition of your Fire; 3. The disposition of your Fire; and 4. The ordering, governing, or regimen of your degrees of Fire.

The Materials are of five sorts; whereof two are common, and the other three extraordinary, *viz.* Coale, Wood, a Lamp, the Beams of the Sun, helped by a Burning-glass, and Horse-dung.

Your Coals must have two conditions to be good; they must be of good Wood, and of any Wood rather than of Oak, because all Oak-Coal flyes, and may breake you Glasses. 2. They must be very dry, that they may make a quick live-fire, and spare you the labour of blowing; the best Coal is that which is of a middle size, round and of a Beech-Tree: the Wood must have the same qualities, for the same reasons.

The Lamp is a Tin-Box full of Oyl, in which swim three or four wicks, or links: this is set in the Lamp-Furnace; which serves to digest or distill, with a long and moderate heat, without any obligation of being present at the operation.

Because

Because a Lamp-fire is very seldom used, we have not in the description of Furnaces made any mention of a Lamp-Furnace, neither will we here say any more of its figure, and proportions, nor of the Oyl that is to be used; being resolved to set down all these things more particularly in some of our Operations.

The Sun-Beams serve to extract Tinctures; to make long digestions, to Calcine some Minerals, especially when the said Beams are gathered by a Burning-glass: which way we shall also describe at length in some of our Operations.

The Horse-dung is used by putting into it Vessels sealed up hermetically, or close stopped, there to ferment and circulate. We shall also describe this way in some of our Operations.

The Interposition of the Chymical fire, is of four sorts. 1. When between the Vessel and the Fire, there is nothing but two Iron-Barrs, or a little Round to set the Vessel on, and this is called working by a naked fire. 2. When between the fire and the Vessel, there is an Iron-plate, or Brass Kettle, or an Earthen Pan, full of ashes or sand, into which the Vessel is sunk more or less; and this is called, Working with a Sand-Fire, or of Ashes. 3. When between the Fire and the Vessel, there is a Kettle full of Water, into which your Vessel is set up to the neck; and this is called, working by a *Balneum Mariæ*, or *Mariæ*, that is, a Sea-Bath, or *Maries* Bath. 4. Is when between the Fire and the Vessel, there is a Kettle full of water

Water, which Kettle is covered, and its Cover has five holes in it, upon which are placed as many Vessels to receive the Vapour of the Bath; and this is called Working by a Vaporous Bath.

The disposition of the Chymical fire is of four sorts: 1. Where the fire is placed only under the Vessels, as is done in the five Furnaces following, *viz.* of the great, and small Reverberatory of the circulary fire, of the sand fire, of the *Balneum maris*, and Vaporous Bath; and observe, that though in the two first Furnaces the heat is by Reverberation as strong above as below the Vessels, yet the fire, is only under them. 2. Where the Coals are layed only round about the Vessel upon the ground; and this is called *Ignis rotæ*, or a circulary fire. 3. Where the Coals are not only layed round about the Vessel, but are heaped up to the top of it, and that is called a fire of half-suppression; but, if you cover even the top of your Vessel with Coals, then 'tis a fire of whole-suppression. 4. Where the fire is altogether above the Vessel, which is also a fire of suppression; and is used in distillations *per descensum*, for which Operation we make use of a great earthen glazed Tunnel, of a little Iron Plate full of holes, and of a Kettle full of fire: which way of operating, we will teach more distinctly in some of our Processes.

The Regimen or Degree of the Chymical Fire, is also of four sorts; 1. When you give and continue a small fire, all along the Operation, as is practised in the first sublimation of dulci-

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fied Mercury. 2. When you give a moderate heat either at firſt, for fear of breaking your glaſſes, or by little and little, when there is the like danger; and then maintain this heat in ſuch an equality as to augment, and diminiſh it when it paſſes the limits of moderation, as it is practiſed in the diſtillation of the Spirit of Wine; and in a ſand-fire, where you ſtop your aſh-hole doore, and almoſt all your fire-room door; as alſo the hindmoſt Regiſter, that ſo you may keep your Coals in that heat that they are in. 3: When you augment the heat by degrees, till you come to the laſt and greateſt you can procure, and that ſoon after, that your operation ceaſes as it is practiſed in the diſtillation of the Oyl of Bricks. And obſerve here, that all the activity of the fire is divided into four degrees; a little fire is the firſt degree; a moderate, is the ſecond degree; a great fire is the third; and a very great and intenſe one is the fourth. 4. When you have augmented the fire by degrees, and are come to the laſt, which you maintain the ſpace of ſome hours, as it is done in the diſtillation of the black Oyl of Vitriol, or Colcothar.

The Spirit of Salt.

TAke a quantity of Potters-Earth, cut it i to slices of the length, breadth, and thic ness of a finger, and set them in ord upon a Grid-iron; which you shall set up red Coles in a hot Oven after the bread drawn: when they are dry on one side, tu them on the other; then take them out, a powder them in a Mortar: and keep this Eart thus dryed and powdered, as well for this Oper tion, as for divers others.

Mingle five parts of this Earth, thus prepared with one part of common Salt, beaten to po der, but not decrepitated; with this matter a Glass-Retort, of an ordinary size, which m be luted up to half the neck; set it in close Reverberatory, and fit to it a lar and capacious Glass Receiver. Give your f by degrees, coming as soon as you can to t last degree, which continue twenty four hour or till your Recipient seem cold, though the R tort be violently hot; from whence you m inferr, that your matter hath sent out all its Sp rits: out of one pound of Salt by this metho you'l draw nine or ten ounces of Spirits.

Observe, 1. This Earth is given to the Salt an intermedium to hinder its fusion: for Sa melts in a great fire, and being once melted, b comes so fix, as there is no raising of its Spir to distill them.

Obser

Observe, 2. That we rather make use of a Glass, than of an Earthen Retort; because, the Spirits of Salt being very acid, and something corrosive, might so penetrate the Earth of the Retort, as to lose something of their vertue, and dull their activity; therefore you must also keep your Spirit of Salt in Glass, not in Earthen Vessels.

Observe, 3. That the Salt must not be decrepitated, that is, separated from its Phlegm, nor the Clay absolutely dry'd, or heat red in the fire: for it is necessary, that there should remain some watrish humidity in both: to the end, that this phlegm coming, first in distillation, may help the acid Spirits, and be as a Vehicle to them; otherwise, were your fire never so violent, if there were no Phlegm, you would never obtain any acid Spirits.

Observe, 4. That your Retort must be filled up to the neck, because the Spirits, in their first rising and separating themselves from their grosser parts, would, if there were any *Vacuum*, presently re-impregnate themselves, and be so fix'd, as that no power of fire would be able to raise them again and make them Volatil: whereas the Vapours raised, meeting with no empty room in the Retort, are not able to condense there, but by the fire are forced into the Recipient; into which they enter in form of a white vapour, which by little and little cools, and condenses, and at last dissolves into a Liquour white and clear as water.

Observe, 5. That that phlegm which first comes

comes is little in quantity; and if you will have your Spirit strong, and pure, you may deflegmate and rectifie it in a sand-heat.

Its vertue and use is, It resists all corruption taken interiourly, and outwardly applied; and for this reason in venomous, and malign Fevours, we mingle three or four drops of it with Cordial Julip: and for a preservation against the Plague, we put a spoonfull of it into a quart of Oxycrate, and so rub the body all over before a good fire: It whitens the Teeth admirably being mingled with a litle Water or some syrrup; its a powerfull diuretick against suppressions of Urine, caused by the oppilation of the conduct thorow which it should pass: it drives the Gravel out of the Kidneys and Bladder; and so is specifick to break the stone of the Kidneys,& Bladder that if you put a Stone cut out of a human Bladder, into a quantity of Spirit of Salt, it will dissolve immediatly without fire, or any addition of any thing, though it were never so hard; it is used to dissolve Gold, and make it Potable: if you do what its Vertue, by putting to it a little Salt decrepitated before you put your Gold in it; alone it dissolves Pearls and Coral.

The marks whereby you may know and distinguish this Spirit from others, are these. 1. That it is clear and white, drawing to a citrine, transparent colour. 2. Being new made, it is Vaporous, and seizes the nose presently, but without stink; and being old, it has no odour at all. 3. That upon your tongue it is of an acid biting saltish taste. 4. It [illegible] the

ther corrodes, nor tinges of any colour its cork-stopple.

Spirit of Niter.

MIngle one part of fine and well purified Niter, with four or five parts of Potters earth prepar'd, as in the Chapter of Spirit of Salt; fill with this, a Glasse-Retort well luted up to its neck; place it in a close Reverberatory Furnace, fitting to it a large and capacious Recipient; give your fire by degrees, till you come to the highest, which continue twenty four hours. The Phlegm will come first, and in small quantity, and also with a little Spirit, which will appear in the Recipient in form of a White Vapour; a little after the pure Spirit will come, appearing in form of red Vapours, which will make your Recipient bright, and red as a Ruby. Out of one pound of Niter thus distilled, you may have four ounces of Spirit.

Obs. 1. That you must be very exact in luting your Retort close with you Recipient; lest many of your Vapours should exhale: and however, the Artist must have care of coming too near at that time; lest the sulphureous, and Malign Vapours of the Niter (which our Authours call the flying Dragon) should offend his Brain, and Nerves, and make him Paralytick, by the fusion and resolution of the humours of the Brain, which at that time

borrowing from the subtle Nitrous Vapours a extraordinary thinness, and Penetration, woul easily insinuate Themselves into the nerves, an by their abundance, cause a total Obstruction.

Obs. 2. That we give the Potters Earth t Niter, as we do to Salt, to hinder its fusion: no Niter is very easily melted, because it is the Bod which helps other Bodies to be so too; by rea son of its great thinness, the abundance of it Sulphurtous substance, and its Penetration; b when once it has been melted, it becomes so fi that, having lost all its sulphur, it can neither ev porate, nor be inflamed, though you put it into t fire: Then therefore it is called Salt of Nit being fix as Salts; whereas before its fusion, was so strangely Volatil, that when you did put a Coal into it, it presently was in such flame, that it was almost quite consumed.

Obs. 3. That for this Operation we make u of very fine purified Niter; because the purer is, the less it hath of fixed Salt in it, and therefo yields more Spirits; you may learn in the Cha ter of Crystal-Mineral, how Niter is purifi and that in its purifying, it is devested of i fixt Salt.

Obs. 4. and 5. That the Retort must be of Gl and filled up to the neck, for the reasons alledg in the precedent Operation.

Obs. 6. That the Phlegm which comes fi in the distillation, is in a very small quantity, a cannot be separated from the Spirit by recti cation; because this Spirit is so Volatil, that comes of a sudden conjoyntly with the Phleg

and so the rectification would be unnecessary; the Phlegm being in so small a proportion to the Spirit, as not to be able to make the last lose any thing of its activity and energy.

Its Vertues and use: This Spirit is Corrosive, not only applyed to Warts, rotten Flesh, and the Gangræn, but it corrodes and dissolves Mercury, and the other Metals; it is often to be preferr'd to *Aqua fortis*, for these two uses; or it is not so burning in its action upon the flesh, as *Aqua fortis*; & it is much fitter for the dissolutions which are made by it of Mercury, and other Metals and Minerals, in order to the preparing of some remedy to be taken inwardly, as well because pure Niter is an acid aperitive, and pure Vitriol is an acid vomitive; as because Niter, being a Sulphureous Salt, drawn from temperate Animals, and Vitriol, a terrestrious Salt drawn from Minerals, by their union in the composition of *Aqua fortis*, is produced a malignous quality. Nay, it is fitter than *Aqua fortis*, for the dissolution of Minerals in order to make Fucuses for the face, because the Spirit of Niter, applied to the skin, leaves but a little yellow spot, which may be easily taken away; whereas *Aqua fortis*, leaves a deep-orange-spot, so sticking, and adhæring, that it can never be taken out, but with the loss of the skin; from whence we may inferr, that a *Fucus* prepared with *Aqua fortis*, should rather black than whiten the skin.

The marks to distinguish this Spirit, are these; 1. That it is of the same colour and transparency as the Spirit of Salt. 2. That it is very

vaporous and stinking, coming near the stinki
smell of *Aqua fortis*. 3. It is too corrosive a
biting, to be tasted upon the Tongue; but, to t
its goodness, pour out some drops upon a Br
halfpeny, and, if it be right, it will presen
ly boil and makes the halfpeny stir, it produces
blew colour in the said halfpeny. 4. It co
rodes and makes its linnen stopple look yello
as *Aqua fortis* uses to doe; sometimes the Spir
of Vitriol, and Sulphur, are sophisticated b
putting a little Spirit of Niter or a little *Aq*
fortis into common Water, till there result
acid taste, which is not caustick: but you shall p
ceive this cheat, if having rubbed a Paper wi
the Spirits of vitriol and sulphur in one pla
and the Spirit of Niter and common water
another place, you present the said Paper to t
fire; for then the place rub'd with the Spirits
Vitriol, and Sulphur, will grow black and brea
and the place rub'd with Spirit of Niter
common Water, will only grow yellow, and
break.

The Spirit and black Oyl of Vitri

TAke an Earthen pot un-glazed, of t
Earth they make Crucibles of, fill it up
the brim with good green Vitriol; set this p
upon a Salt-seller in a great circulatory Fire:
two hours time, or there abouts, your Vitr
having first dissolved into, a Liquor will be dr
deflegmat

deflegmated and at last coagulated into a gray-ish lump; then take out your pot, let it cool, and, when cold, put your matter into a Brass or Iron Mortar and powder it.

Take a Glass Retort, well luted up to half the neck; fill it with the said Vitriol, and place it according to Art, in a great Reverberatory fire, fitting to it a great Receiver. Give your fire by degrees, coming as soon as you can, to the last, which continue till you perceive, in the top and sides of your Receiver, a kind of black Veins that trickle down to the bottom; these are the black Oyl which begins to distill. Then unlute your Receiver from its Retort, and separate by inclination, the acid Spirit of Vitriol, which hitherto has been distilled, and which is of a white and transparent colour like water, and which enter'd your Receiver in the form of a white Vapour.

By this time your Vitriol will be calcin'd into a red colour and brought to be a Colcothar, which yet retains its black Oyle. Which to extract, you must again fit the receiver to its Retort without lute; for else, the neck of the Retort being exceeding hot, would presently break by the approach of the cold, and moist Lute; continue then your fire, and give it in the highest degree, for the space of six, or eight hours, till your Receiver be cold, though the fire be vehement under the Retort, by that you'l perceive that the contain'd matter has yielded all its black and thick Oyl. Let your fire go out: then take out your Retort, which by the

long violence of the fire will seem somewhat sunk and straitned, and in it will remain a Colcothar, devested of its phlegm, its Spirit, and its black Oyl; but yet containing the fixed Salt of Vitriol, and therefore is not so sharp and acrimonious as the first Colcothar. 'Tis out of this second Colcothar, that you may extract the *Caput mortuum* of Vitriol, by making a *Lexivium* of the said Colcothar, to extract its fixed Salt. Out of one pound of green Vitriol, you'l have nine or ten ounces of Spirit, with its Phlegm, and half an ounce of black Oyl. The acid Spirit of Vitriol contains much phlegm, which came first with it; therefore if you desire to have a pure Spirit, you must evaporate the phlegm by putting this Spirit Inflegmated into a Matrass well luted, which set upon a Salt-seller in a small circulatory fire, till the whole substance be half diminished, and begin to look a little yellowish; if you continue this Evaporation any longer, your Spirit will become blackish, drawing near the colour and acidity of your Oyl of Colcothar.

If reciprocally with the said black Oyl of Colcothar, your desire to make a white acid Spirit, do but mingle in a Matrass, one dragm of the said Oyl with an ounce of common water; then you shall see, that the said Oyl will presently fall to the bottom; and will so heat the neck of the Matrass, that you will scarce be able to hold it in your hand. Mingle them well by agitation till the water grow blackish, then through Paper, filtrate the said liquour, and there will

come a cleer acid Spirit, as yellow as Gold which will have the same force and vertue as the common Spirit of Vitriol; the Paper retaining the black and thick *fæces*. From whence we may conclude, that this clear Liquour, which we call Spirit of Vitriol, is nothing but a small portion of the true Spirit mingled with a great deal of Phlegm, and that this black Liquour which we call Oyl, is indeed a pure Spirit of Vitriol, entirely dephlegmated; but because of its sulphureous blackness and thickness, it is improperly called Oyl, being somewhat unctuous to the feeling, though it be not at all inflamable, as all true Oyls are.

Obs. 1. That you must dephlegmate the Vitriol, and powder it well before you put it into your Retort; else you would not draw off the Spirit, but the phlegm alone: for, the matter would coagulate in the bottom of the Vessel into a lump, which sticking close to the sides of the Retort, would so retain all the Spirits, that a strong fire of fourty hours lasting, would scarce be able to reduce this masse to powder: therefore it is better to dephlegmate and reduce to powder your Vitriol, before it be put into the Retort.

Obs. 2. That we give no Intermedium to Vitriol, as we doe to Salt and Niter; because, being a terrestrious Salt, it cannot be melted, and by consequent, cannot fix and retain its Spirits within its self: so that, provided it be dephlegmated, the Spirits are easily raised, and distill'd by the violence of the fire.

Obs. 3. That you need not fill your Retort up to the neck with your matter, because the Spirit of Vitriol, having not so much tenuity, as the Spirits of Salt and Niter, is not in danger of re-impregnating and fixing its self in its own masse.

Obs. 4. That the Retort must be of Glass, for the reason alledged in the Spirit of Salt.

Obs. 5. That you choose good Vitriol, not too dry; for it will yield more Spirit and Oyl: therefore that which comes from *Germany*, and the Low Countrys, is better than the *Roman* Vitriol for this effect.

Its vertue and effects: Both the white Spirit, and the black Oyl, are Acids, which pleasantly and excellently do cool, desopilate, and resist all corruption: and therefore they are frequently, and with good success, made use of for the Liver and Kidneys, in burning and Pestilentious Feavours. The dose is five or six drops of the Spirit, two or three of the Oyl, either in Water, Broth, or white Wine: It serves for the dissolution of Metals; and in Surgery it is used, either pure, or mingled with a little water or *Mel rosatum*, to touch the ulcers of the mouth.

The first and second *Coleothar* are both an excellent Astringent, given in violent *Diarrhœa's*, *Dysenteries*, and Hepatic Fluxes: or, mingled with some unguents, it stops bleeding Wounds.

The Marks to distinguish the Oyl of Vitriol from other, are these: 1. It is very black: 2. It is not only acid, but caustick: 3. It is very heavie-

heavie: 4. It seizes the nose, with a strong Vapour, when new made; and in all these four conditions, it is like the Oyl of Sulphur.

As for the Spirit, it is known by its pleasant acidity, by its yellowish colour: and because, being old, it yields no smell, no more than Spirit of Sulphur, neither doth it corrode, or make its stopple yellow; the Spirits of Niter, and *Aqua fortis*, are distinguished from it by their smell; and because they corrode, and change the colour of their stopples: Spirit of Salt is known from it, because it has a brackish taste, and smells strong when new, being much more intolerable, and unpleasant, than Spirit of Vitriol.

Aqua Fortis.

TAke a Glass-Retort luted up to half its neck, put in it equal parts of common Niter, and green Vitriol, not dephlegmated, but they must be beaten to powder in an Iron Mortar before: fill but two thirds of your Retort, leaving a third empty, for else the Vitriol being melted by the Niter, would, it may be, rise, and run in substance into the Recipient, before the distillation of the *Aqua fortis*, could be begun.

Set your Retort in a little Reverberatory, or in a little circulatory fire (a great Reverberatory being not so necessary here, because the Niter is of it self so volatil; and having melted the Vitriol, it makes it likewise capable of yielding its Spirits

rits without a very violent degree of heat.) Give your fire by degrees; continuing the first degree till the phlegm, which will appear in a white vapour in the Recipient, be distilled; otherwise if at first you did give a great heat, the Niter and Vitriol together would boil over your Vessel, and in their own substance run into the Recipient: When your Recipient begins to fill with red Vapours (which is the sign of the Spirit's comming forth) augment your fire, and cover your Retort with Coals; if it be in a circulatory fire, continue this heat til your Recipient begin to lose something of the brightness of its red colour, and till it become cold, though the fire be vehement under the Retort: then the matter has sent forth all its Spirits, and you shall find these red Vapours dissolved all into a white clear Liquour, as water: Out of one pound of common Niter, and as much of green Vitriol undephlegmated, you may have sixteen ounces of *Aqua fortis*.

Obs. 1. That though the Spirit of Vitriol cannot be drawn from Vitriol undephlegmated, yet *Aqua fortis* may; because being in company with the Niter, it cannot, after the distillation of its Phlegm, coagulate in a lump, which might fix and retain its Spirits; the Niter, by its opening Sulphur, keeping the Vitriol porous and vaporous.

Obs. 2. That *Aqua fortis* may be very well made with dephlegmated Vitriol, and fine Niter; and then it is so strong and corrosive, that it is *Aqua regalis*, and can dissolve Gold and Sil-

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ver; but becauſe we doe not ordinarily need in Chymiſtry ſo ſtrong a diſſolvent, for the frequent diſſolutions we make of Mercury, of Tin, of Biſmuth, and of Silver; we are content with *Aqua fortis* prepared as has been taught.

Its vertue and uſe: This is a very cauſtick burning water; ſome do touch Warts and Corns with it: but it is dangerous ſo to do, and our Chymiſtry will afford us gentler and fitter remedies, which I ſhall ſet down hereafter. It ſerves to diſſolve your Metals and Minerals: the Dyers uſe it, to give a ſtrength and penetration to their Colours.

The Marks to diſtinguiſh it, are, 1. It is yellowiſh; 2. Stinks very much; 3. It yellows and corrodes its ſtopple, and the bladder and packthred that are employed about the ſtopping of it: 4. If you pour a drop or two of it upon a Braſs halfpeny, it makes it ſtirr and look green.

The Spirit and black Oyl of Sulphur.

TAke a great Stone, or un-glazed Earthen Pan, put into it a pound of common water; in the middle of this Pan, ſet a little ſtone-pot, and upon this pot, place a little flat Earthen cup ful of ſand: in the mean time, reduce into powder four pound of brimſtone,

and

and of this put one spoonful into the middle of the sand, then take a great Coach-wheel nail and heat it red hot, and with a pair of Tongs put the head of it into this Brimstone which is in the sand, presently the brimstone will be in a flame: therefore have ready a Glass-Bell well proportioned to the bigness of your pan and with it cover your pan, as soon as the Brimston begins to take fire; and that you may lose nothing of the Vapour, stopp with Linnen the junction of the Bell and pan; from this inflamed Sulphur will rise an abundance of white Vapours which will be converted, part of them into acid Spirits, which being received in the pan, impregnate the water; and part of them into yellow flowers of Sulphur, which will be found sticking to the sides of the Bell and Pan, and will form a little skin upon the superficies of the water. After a quarter of an hour, the vapours being ceased, and condensed into Spirits, and Flowers; break that skin that the water may be at liberty to re-impregnate it self with new Spirits at a second flagration; then put an other spoonfull of Sulphur, inflame it, cover it, and in a word do as before, continuing this till all your Brimstone be spent. When you have done, there remains a muddy acid water, into which put all those flowers of Brimstone, which you find sticking to the sides of your Pan, or Bell, as likewise those that swim upon the water; put them all together into a Matrass, of an ordinary size not luted, which set upon a Salt-seller in the little circulatory fire; the phlegm will be evapo-

rated

rated, the flowers will dissolve into the Spirit, and the spirit will wax black; then with a wet clout take out your Retort, and pour out your Liquour thus hot, into a white Earthen bason. The Spirit being cool, you'l find in the bottom the flowers congealed into a bright yellow lump. By this method in one day, out of four pound of Sulphur you may draw half an ounce of black Oyl; and if you put an ounce of Water upon one dram of this Oyle, mingling them well in a Matrass, and then filtring them through a course Paper, you may have that which is called the Spirit, or acid of Brimston, of a yellow bright transparent colour like Gold. Or, by another way, do but evaporate the two thirds of your pound of water impregnated with the Spirit of Brimstone, and there will remain four ounces of a yellow inflegmated Spirit.

Obs. 1. That we put sand into the little Earthen cup, lest the Brimstone, inflamed, should break it; which it would do, were it empty.

Obs. 2. That, Water is put into the pan, that the Spirits may be the better gathered, without which they would be apt to be consum'd to no purpose, in the superficies and substance of the said earthen Pan.

Obs. 3. That the Matrass in which the Evaporation is performed, must be short-neck'd, that the phlegm may the easilier Evaporate; therefore let it be two inches high.

Obs. 4. That we pour the said Spirit hot into a white Basin, and not into a glazed one, lest it should corrode the Lead of the Vernish, and so be

weakned

weakned, and loaden with a blackness, which filtration would be able to take away: and the reason why we pour out the Liquour hot, is because if we did let it cool, the Brimstone would congeal into such a lump, as could never be come by, without breaking the Matrass.

Obs. 5. That, if by this method there is but little Spirit drawn from such a quantity of Sulphur, yet by all the other processes you meet with, in Authors, you shall draw lesse.

Its vertue and use: It cools and purifies the blood, resists corruption, appeases the burning Fevours. 'Tis a very good preservative against the Plague, taking three or four drops of it in a glass of water every morning. It is most excellent to touch Venereal Ulcers, and Warts; it dissolves Pearls, and Corral: It fixes Mercury; but cannot dissolve him, no more than the other Metals.

The Marks by which it is distinguished, are the same by which Spirit of Vitriol is known from other Spirits; but all the difficulty is to distinguish Spirit of Vitriol from Spirit of Sulphur.

Spirit of Wine.

TAke as much good *Aqua vitæ*, as will fill your Vesica or Copper body half full: set it in a naked circulatory fire; fit to it its cover or Moors-head, bordered with its refrigeratory having

having before hand put into the Veſica's long neck five or ſix ſponges, held up by two ſticks ſet, a-croſs, and kept from falling down or riſing up: Then to the Moors-head Noſe fit the moveable Pipe, which ſhall joyn it with the long Braſs Pipe that goes through the two Hogs-heads of water; then, ſtarch on long ſlices of Paper upon all the conjunctions of the Pipes; and over the Paper, put cloth-ones, which bind faſt with packthred: fit your Receiver of glaſs to the lower end of the long braſs Pipe that goes through the Hogs-heads; ſet your Coals on fire, and add ſome wood to them, to make at firſt a great fire, which may raiſe and diſtill your Spirit quickly. In a very little time, it will come not by drops, but in a ſmall ſtream like a Fountain. In all the courſe of this Operation, there muſt be ſingular care taken that the diſtillation be equal and moderate, ſo that as ſoon as you perceive white vapours in the Recipient, diminiſh your fire; either by throwing aſhes on it, or taking a good deal of it away. For theſe white Vapours are the Spirits which come in ſuch an abundance, that they have not had time to condenſe, neither in the Moors-head, nor in the long Pipe, and therefore will eaſily ſcape out of your Receiver, and ſo the beſt of your Spirit will be loſt to no purpoſe: beſides, whenſoever the Diſtillation is performed in too big a ſtream, though there be no Vapours, yet diminiſh your fire. But if it ſhould come drop by drop, then augment the heat; you may take notice that the firſt quart that comes though excellent and pure, yet it is not clear;

but

but muddy, having contracted a foulness fro
the sides of the Vessel; therefore throw it
again with a Tunnel by the little Pipe, whic
on purpose is in the top of the Vesica, and presen
ly stop the said Pipe close with its Wooden stop
per; the Spirit that shall from henceforth be di
stilled, will be clear, and transparent. By this me
thod, out of thirty quarts of good *Aqua vit*
you may draw eighteen quarts of good Spirit o
Wine, in a day, and in one only Vesica: Yo
must observe often, all along your Operation
whether your Spirit be well deflegmated; whic
try thus: Put as much Gunpowder as you can tak
up with your two fore fingers & your thumb, int
little spoon, which fill with Spirit of Wine; the
fire it with a Match, or lighted Paper: for if thi
Spirit take fire and burn blew, till it be con
sum'd, and then fire the Gunpowder, and that a
last there be no mark of any moistness left in th
spoon, you may be sure your Spirit is very pur
and very good.

The last Spirit that comes, is not good, as wel
because it brings phlegm with it, as because i
smels of the *Empyreuma*, or burning; and havin
been long in the Vesica is somewhat impregnate
with the substance and qualities of the Copper
Therefore set it aside to be used exteriourly, or i
mechanicks; or else rectifie it again with ne
Brandy. Whensoever you perceive that ther
comes some muddy whitish drops, which mak
the clear Spirit, which was in the Receiver
change its colour, then know that it is time t
make an end of the Operation: for these drops ar
the

the flegm which produces this effect upon the pure Spirit: for if you put two or three drops of water into good Spirit of Wine, it will do the same thing. There will remain in the Vesica, twelve quarts of flegm muddy and greenish from the Copper; this tincture is to be thrown away.

This Spirit of Wine does also contain in itself something of the Copper: nevertheless it may be taken safely by the mouth, because that Copper extracted by this Spirit, is not so dangerous as Verdigreece extracted out of Copper by Vinegar. Nay the Copper does contribute much to the preservation of this Spirit in its force. But, if in a Glasse Alembick you will take the pains to rectifie it, and reduce your eighteen quarts to fifteen then you may without scruple use it in all manners; and in the bottom of your Cucurbit, there will remain a green tincture, which is a flegm impregnated, with the Salt and Sulphur of Venus, or Copper. Which tincture Evaporated, congeals into blew Crystals; then powdred and dissolved in common water, filtred, and then Evaporated a second time, will again in a cold Cellar congeal into blew transparent Crystals of Venus.

Its vertue and use: Spirit of Wine is a powrfull dissolver for all sorts of Gums and rosins as well for the use of Physick as to make *China*-varnish: it is good for Burnings, Contusions Gangreens, Palsy, Cold Fluxions; particularly, if it be circulated with Salt of Tartar, it serves to extract perfectly the tincture of all Barks, Rinds,

Woods Berries, Aromatick, Balsamick, and Resinous, as also of Opium; to make of them, Magisteries, extracts, essences, and Syrops.

The Phlegm, Spirit, and Oyl of Turpentine.

FIll half the fourth part of a Brass Vesica with clear *Venice* Turpentine; pour upon it common water, till the vessel be but half full lest if it were fuller, the Turpentine should boil up, and run in its own substance into the Receiver. Fit to the Vesica the Moors-head, bordred with its refrigeratory, omitting the sponges in the neck, because the Liquour here is not spirituous enough to pass through them. Give your fire, and govern your Operation altogether as has been taught in the Chapter of Spirit of Wine.

The Flegm, Spirit, and Oyl will come altogether; but the Flegm will sink to the bottom of your Receiver, whereas the Spirit and Oyl will swim above. There will remain in the Vesica a thick substance called *Colophon*. Separate your flegm by a Glass Tunnel, and keep the Spirit, and Oyle, incorporated together. This Oily Spirit is sold by Druggists at *Paris*, under the name of Spirit of Turpentine they have it from *Provence*, and afford it us at

much cheaper rate, than we could make it at *Paris*.

How to ſeparate entirely the Spirit from the Oyl. Fill a Glaſſe-Retort half full, (your Retort muſt be luted, only there muſt be upon the neck a long empty ſpace left to ſee into it, that ſo you may perceive towards the end of the Operation, of what colour your Oyl is:) ſet your Retort upon a Round, in the little circulatory fire, and diſtill your matter, till you have three Parts of Spirit out of it, and that in the bottom of your Retort you ſee a thick red Oyle, almoſt of the colour of a Pomgranate. Take then your Retort off from the fire, and poure out this hot Oyle into an Earthen Pan of white ware. As for the Spirit which you have in the Receiver, rectifie it again in the ſame Retort, and by the ſame ſort of fire, ſo as to diſtill three quarters and an half in Spirit, and the reſt remain in form of a thick red Oyl: which done, pour out the ſaid Oyl to that which you have already. Then rectifie your Spirit again, doing thus, as long as you can extract any Oyl out of it: then your Spirit will be right and pure, deveſted of its Oyl, and without ſmell; but it will ſtill have its force and acrimony.

The Uſe and Vertues of the Spirit: Tis a powerful diúretick, and makes the Gonorrhæa's flow abundantly, by melting and inciding thoſe rough and clammy humours, which ſtop the paſſages of Sperm and Urine: It diſſolves the ſoft Stones which are not yet ſtrongly petrified:

It dissolves all Gumms better than Spirit of Wine, and that without any additional heat, either of Fire or Sun; Therefore it is used in making the best Vernish: it dissolves with a small heat Brimstone, and makes a better Balsam of it, than that which is made with the oily Spirit of Turpentine, bought at the Druggists. The *Provencals*, who are great drawers of essences, use it in all their Operations, either upon Flowers, or Woods, Barks, Leaves, or Berries, both Aromatick, and Balsamick; because this Spirit being naturally unctuous, is easily impregnated with the oily essence of these Druggs; and because it has no smell of its own, it easily takes the Aromatick or Balsamick Odour of any of those that are infused in it, and then distill it in the Vesica, as we do Spirit of Wine. For do not think that their essences are pure and drawn from their Druggs alone: no, they are nothing but Spirit of Turpentine, impregnated with the Essence of them. So that this Spirit has a double use; for it extracts the Essence and multiplies it considerably.

The vertues and use of the red Oyl: It is a Soveraign *Anodynum* for the wounds of nervous parts, because it has lost all its *Acrimony*, which consisted in its Spirits.

The Salt of Tartar, of which is made the Oyl of Tartar by solution of the Salt.

Take equal parts of pure Niter, and good *Tartar*, either white or red; pouder them apart very fine: then mingle them in a glazed earthen Pan; then, with a red hot Iron, stirr all this masse, untill the Niter be entirely consumed and evaporated, which you shall know by the ceasing of flagration or burning. Thus your *Tartar*, being perfectly calcin'd, will afford you a Salt, as white as Snow, and the same in weight, with that which you mingled with the Niter at first; whence you may conclude, that *Tartar*, is all Salt.

The Oyle of *Tartar* is made thus. Set this Salt in a very wet air, such as the air of a Cellar; there it will melt, and dissolve into a white viscous Liquor, which we call Oyl of *Tartar* by solution, to distinguish it from the black stinking Oyl, which is drawn by distillation in a Retort and open fire: nevertheless, to speak properly, the name of Oyl is not due to either of them; because, they are neither Sulphurous, nor inflamable substances. If after you have made the Salt of *Tartar*, you are in hast to have the Oyl, you may presently compass your end by throwing eight ounces of common water upon four ounces of this Salt of *Tartar*; for then it will all dissolve into Liquor.

Obs. 1. That you choose good *Tartar*; for that

is all Salt: whereas the grosser sort of *Tartar* has much of fœces, and terrestreity in it, which would spoile this Operation, in which we pretend to dissolve all the Salt into Water.

Obs. 2. That your Niter be well devested of all its fixt Salt, because we desire here a pure Salt of *Tartar*, without the mixtion of any other: therefore your Niter must be entirely volatil, and exhale all in the flagration.

Obs. 3. That they both be well powder'd, and mingled together, that so, the Niter penetrating the *Tartar*, do throughly calcine it; and it is for this reason that we use an equal quantity of Niter. By this Method, the *Tartar* is farr better and easilier calcin'd than by the naked fire, without any Intermedium.

Obs. 4. That we make use here of an earthen glazed Pan, without any fear that the Niter should corrode the lead of the Verniſh; because its flame is not retaind, but is at liberty to exhale. An unglazed, or stone-Pan, would be unfit for the Operation; because, it would presently break by the inflamation of the Niter.

The Virtues and Use of the Salt: 'Tis a great Aperitive, Deopilative, and Diuretick; the dose is from one to two dragms, in some Broth, or any other appropriated Liquor. The *Tartar* Vitriolated, because of the gratefull acidity which it borroweth from the vitriol, is much more pleasant to take than this Salt. This Salt, in the quantity of half a scruple, will extract in a quarter of an hour the vertue and tincture of half an ounce of Senna, in a glass of cold water, and at the same time

proves a good Corrective to the noysome smell and taste of the Senna, giving it also the vertue of penetrating into all the Veins.

The Oyl of *Tartar* is very scouring, and drying; and is therefore excellent to rub all Scabs, Itch, and Tettars; as also to take away Spots, and Sun-burns upon the Hands and Face. It is useful to precipitate the dissolutions of Metals, and Half-metals, or Marcasites. And, pray, by the By, take notice, That all Acids, as Sea-water, distilled Vinegar, Oyl of Tartar, Spirit, and black Oyl of Sulphur; and Vitriol, Spirit of Niter, and *Aqua Fortis*, serve to precipitate the dissolutions of Minerals: but that ordinary common Water, serves to precipitate the Distillations, and Calcinations of Minerals; as also, the Dissolutions of Vegetables made in Spirit of Wine, for the Reasons which hereafter we shall alledge.

Crystal Mineral, or Lapis Prunellæ.

TAke a pot of the same Earth that Crucibles are made of, of the bigness of a Chamber-pot, and like it in Figure, with a handle; set it upon two Bricks in a great circulatory Fire of Suppression; before the Pot be heated, throw into it as much pure Salt-peter in powder, as will fill it up to the brim; the Salt-peter will melt; and as soon as it is melted, throw into it a spoon-

ful of Brimstone in powder, which immediately will take fire, and be consumed: when the flame ceases, throw in as much more, and so do three or four times. This Brimstone does not communicate any vertue to the Niter, onely serves to purifie it, by precipitating its *Fæces* to the bottom of the Pot, till it become so transparent, that after these Projections, and Flagrations, you may see the bottom of the Pot, through the melted Niter. This done, pour a little of this melted Niter into a Brass-tinn'd-Kettle, and presently set your Pot upon the Fire again, having taken away a good part of the Coals round about it; then stir your Kettle so, as to make the Niter spread it self all over the bottom of your Vessel; which done, set it in a bigger Vessel, full of cold Water, that so you may hinder the Niter from burning, and adhering too strongly to the bottom of your Kettle: separate then at last this white Crust, which is as thin, and as brittle as Glass, and as white as Alabaster, and is, by some, called *Crystal Mineral.*

After this, take more melted Niter out of your Pot, pour it into your Kettle, and do all things as before, continuing till there be nothing left in the Pot, but the *Fæces* of the Niter, which you may throw away. Then gather all these thin Crystals together, and put them into a Kettle of Water upon the Fire, there to dissolve by a gentle ebullition; and if all dissolve not, it is a sign there is not Water enough. When all is dissolved, take off your Kettle, and filter this Liquor presently, while it is warm, through a brown Paper,

over

over an earthen unglaz'd Cucurbite. Then ſet the ſaid Cucurbite in a Sand-heat, there to evaporate, till there appear upon the Superficies a thin skin; Then take it off, let it cool; the Niter will cryſtallize into Needles of a ſexangulary Figure, white, clear, and tranſparent, as any Rock-Cryſtal; but as brittle as Glaſs, and of a pleaſant and grateful acidity. And then it is properly called *Cryſtal Mineral*, becauſe of its reſemblance with Cryſtal. Some call it *Lapis Prunellæ*; and that is, becauſe it is ſharp and ſoure, like your wild Prunes or Plums.

Obſ. 1. That we make uſe of a Pot of the ſame Earth, that the Crucibles are made of, and not of an ordinary earthen-glaz'd Pot, becauſe the Niter being once melted, would alſo diſſolve the ledding of the Pot; and being incorporated with it, would loſe much of its whiteneſs.

Obſ. 2. That we fill the Pot full up to the brim, that we may make at once a great quantity of *Cryſtal Mineral*; and becauſe the Niter melted will take up but half the room it did before, being no wayes ſubject to riſe and run over.

Obſ. 3. That you muſt beat to powder your Niter; for ſo, a greater quantity will be contained in the Pot, and alſo be eaſilier melted.

Obſ. 4. That you muſt not ſtay till your Pot be warm, before you put in your Niter; becauſe, the Pot being very hot, and the flegm of the Niter coming to be diſſolved firſt, would be broke infallibly. Therefore put in your Niter at firſt; and ſo by degrees, as your Pot warms, your Niter will

be

be deflegmated: and yet observe, That if you throw a spoonful of Niter into a pot red-hot, it will not break, because there is too little flegm for so much heat.

Obs. 5. That the Niter being hot enough, melts, and is deflegmated; it melts by the means of its flegm; for it is the flegm that puts all Salts into fusion. And whensoever Salts are entirely calcined, or deflegmated, they cannot be melted, except they be wet anew by some washings, and then they grow whiter.

Obs. 6. That if while the Niter is deflegmatizing, there chance to fall into it any small live Coal, then it will all be in a flame, till the Coal be consumed; and, to extinguish this flame, there is no way, but to take out the said Coal, and to cover the pot.

Obs. 7. That if after the melting of your Niter, and the purifying of it by the different injections of Brimstone, you do not take off your pot, or take away some Coals, and the two first rounds of Bricks of your Furnace, that then your Niter will break the pot, though it were of Iron; and then the Fire will inflame your Niter: which inflamed, will all exhale, and vanish away. The reason why the pot will be broken, is, because that then the Spirits of the Niter, being strongly heated, fly out of their Body, and so corrode and break the pot.

Obs. 8. That the Niter does not take Fire in the pot; because, that though a spoonful of Niter cast into a pot red-hot, will presently be in a flame, and vanish all away in smoak; yet a great quantity

quantity of Niter, even after its deflegmations, cannot be set a-fire, but by a red-hot Coal, unless you use a Fire of Suppression, and so penetrate the pot, as to make it fire the Niter. And that cannot be done, because in such an operation, an Earthen or Iron Pot, or Crucible would break, and a Glass one would melt down.

Obs. 9. That the Niter, being melted, is not afterwards coagulated into a lump upon the Fire, as Vitriol and Alum use to do; because they are gross terrestrious Salts, which Niter is not.

Obs. 10. That you must take well purified Niter, that so there be less of fix'd Salt in it: for, the fix'd Salt is easily dissolved into Water; and therefore your Niter being clear of it, will make your Crystals whiter and drier; if you use ordinary unrefin'd Niter, your Crystals will be apt to dissolve into Water.

Obs. 11. That the Brimstone takes fire in the melted Niter, and yet inflames not the Niter; because, the oily substance of the Brimstone is dryer than the Niter, and because, that the Niter can scarce ever be well deflegmated: for, its Spirits, by reason of their great thinness, are subject to evaporate, and be gone with the flegm; as also, because no Vessel can long contain melted Niter, without breaking or melting.

Obs. 12. That the Brimstone purifies the Niter, because that the grosser part of the Brimstone, which has not been a-fire, mingling its self with the melted Niter, hurries along with it, to the bottom, all the *Fæces* of the Niter.

Obs. 13. That *Crystal Mineral* is nothing but a well-

well-purified Niter, that is well deveſted, 1. of its Flegm; 2. of its fix'd Salt; 3. of its black *Fæces*, which it had contracted in thoſe Veſſels, in which Niter is groſly prepared at firſt: and ſo you ſee, unleſs you filtrate it, and then cryſtallize it, it is not ſufficiently purified. When once it has been cryſtallized, then you may diſſolve it again, and reduce it into a white Cruſt, which is called *Lapis Prunellæ*. Now the *Cryſtal Mineral* loſes its flegm, by the melting of the Niter it is deveſted of; its Smoot by the flagrations of the Brimſtone, and by the filtration; and it loſes its fix'd Salt by the cryſtallization.

The Uſe and Vertues: It cools very much, reſiſts Corruption, and is Diuretick: It may be taken inwards, from half a ſcruple to a drachm; and in a Clyſter, from two drachms to half an ounce.

The Niter ſulphurated, or the nitrous Salt of Sulphur.

TAke four ounces of Flowers of Brimſtone, and eight ounces of very fine purified Niter, reduce them into a very fine Powder ſeparately, and then mingle them together.

Then pour into a great ſtone Pan, a pint of Spirit of Urine, (drawn from freſh Urine, in a glaſs Alimbeck, and Sand Fire;) in the middle of this Pan ſet a little ſtone Pot, upon which ſet alſo a little Cup of the ſame Earth.

Then

Then begin to make the flagrations of the ſaid Brimſtone, and Niter together; and for this effect, put a ſpoonful of theſe two powders mingled together into the little Cup, then put into them a red-hot Iron, your matter will be immediately in a flame; therefore cover your pan with a glaſs Bell, whereby you may receive the red vapours of the flaming matter. Theſe vapours will diſſolve into three different Subſtances, *viz.* into Spirits of Niter, and Spirits of Sulphur, which fall together, and are incorporated with the Spirit of Urine in the bottom of the pan; and into nitrous flowers of Brimſtone, which will be found ſticking, partly to the ſides of the Bell, and partly to the ſides of the Pan, and part of them will be ſpread in form of a *Pellicula*, or little skin, upon the ſuperficies of the Spirit of Urine.

Take notice, That in this firſt flagration, your Cup breaks infallibly, becauſe it is not lined or fenced with any thing that can hinder the Niter from exerciſing its activity upon it. In a quarter of an hour, or there abouts, the vapours will be paſſed, and diſſolved into the three Subſtances I have ſpoken of; which done, break that little reddiſh skin upon the ſuperficies of the Spirit of Urin; to the end, that in the following flagrations, the Spirit of Urine may be impregnated with the acid Spirits of the Sulphur, and Niter, which could not be, if that skin remained entire: then take away your broken Cup, in which you will find a whitiſh Cruſt left. After the firſt flagration, powder this, and put it into a new ſtone Cup, and it will keep it from breaking, as the

firſt

firſt did. Then put another ſpoonful of matter into this Cup, fire it, and in a word, obſerve all the circumſtances of the operation already deſcribed; continuing it, till all your Sulphur and Niter be conſumed.

This done, take the calcined *Fæces* of Niter and Brimſtone, which remain in the bottom of your Cup, and reduce them into a fine powder, in an Iron Mortar: then mingle them, with all that is contained in your earthen Pan, taking care to ſcrape off from the ſides, into the Pan, all thoſe flowers that ſtick, either to the Bell, or Pan: Let this ſtand, and infuſe the ſpace of twelve hours; to the end, that the acid of the Niter and Sulphur, may entirely diſſolve all the ſaid *Fæces* and flowers: filtrate this Diſſolution through a brown Paper, over a glaſs Pan, or Diſh, and there will remain in the Paper, ſome grey *Fæces* of the flowers of Sulphur, which you may throw away.

Then begin your ſecond Operation, that is, the deflegmation, or evaporation of your Diſſolution. To this purpoſe, put your Diſſolution into a Matraſs, which muſt not be luted; becauſe towards the end of the operation, you are to ſee what paſſes in the Veſſel: Your Matraſs muſt be ſhort-necked, to the end the evaporation may be quicker; and it muſt not be above three quarters full, leſt the matter ſhould boyl and run over, by breaking the Glaſs. Set your Matraſs upon a Round, in a ſmall circulatory Fire, hindring all ſorts of Coals, either kindled, or not, from coming near your Glaſs, for fear of breaking it. Continue

good

good equal Fire, till you perceive, after a long boyling, a kind of white ſcum upon your matter; then leſſen the Fire, and let your matter evaporate gently, till it be of a clear milky colour, and ceaſe to boyl, and make a noyſe.

Then augment the heat, that ſo, in a ſmall time, you may evaporate the nitrous red Spirits ſtill remaining: then, if with this augmentation of heat, your matter does not boyl, take it off from the Fire, and pour it very hot into a ſtone Pan, ſtirring and turning your Pan, ſo as to make your liquor congeal, and ſpread it ſelf all over equally, in the form of a Cruſt, as white as Alabaſter, but as brittle as Glaſs.

This ſecond Operation, thus performed, you muſt begin a third, which is to mould this Salt into the Figure of glaſs-Vials. This third Operation does indeed add nothing to the virtue of the remedy, but is only an ingenious beautifying of it, which is thus performed.

Fill little glaſs Vials half full with theſe white Cruſts, place a Vial upon the ground, and ſurround it with live Coals, the Salt will preſently melt: when it is melted, take away your Vial, and ſhake it, that the Salt may ſtick to the ſides of it, and ſo take the ſhape of the Glaſs; then wet your Vial with cold Water, and it will break into a thouſand pieces, which will nevertheleſs cleave to the Salt. Theſe you muſt looſen with the point of a knife, and when you have taken away all the bits of Glaſs, there will remain a vial of Salt, as white as Alabaſter, and which may be ſo preſerved, till you need it.

Obſ. 1.

Obs. 1. That to make the Salt of Brimstone, you must calcine the Brimstone, and that nothing can calcine it so well as Niter, which, by firing the Brimstone, raises its volatile part, or Spirits, and leaves in the Cup the Calx of Brimstone, containing but few *Fæces*, and a great deal of fixed Salt: and the Niter being pure, burns all away, and remains not in the said Calx; but, because here Niter is the Agent, therefore we use here as much again of it, as of Sulphur, which is the Patient. The reddish flowers of Brimstone, are also calcined by the said Niter.

Obs. 2. That we use here Spirit of Urine, as well, because that if there were no Liquor, the acid Spirits of Niter and Brimstone would be lost in the pores of the earthen Pan, as because, that the said Spirit of Urine is a powerful Diuretick, and does therefore augment the vertue of our Remedy.

Obs. 3. That the hardest thing in this Operation, is to deflegmate the dissolution of Brimstone, in the Spirit of Sulphur, and there is a great deal of danger that the Matrass will break towards the end of your Operation, when the matter rises, and boyls high; therefore be diligent, moderate your heat, Experience makes a good Artist.

Obs. 4. That after you have happily evaporated your Dissolution, that you may conclude your process, and chuse whether you will mould your Salt into the Figure of glass-Vials, or no; but pour out your Dissolution into an earthen Dish, and so keep it.

Obs. 5.

Obs. 5. That this nitrous Salt of Brimstone, is nothing but the Flowers of Brimstone, calcined by the Salt of Niter, then impregnated with the Spirits of Brimstone and Niter, and at last coagulated into a white Salt. If after the evaporation of the Spirit of Niter, which was incorporated with this Salt, you take of it, and *Sal Armoniac*, equal parts, and sublime them together, you will have a lovely sublim'd Salt, white, and so strong, that it will melt in Paper, and break a Box, if you put it into it.

Its Use and Vertues: 'Tis a powerful cooler, and Diuretick, it purifies the Bloud, resists Corruption, is most excellent in Feavers, both continual, and intermittent; it drives the Gravel of the Kidneys, and cures the Running of the Reines; the Dose is, from ten to thirty Graines, in Wine, Broth, Syrop, Ptisane, Distilled Water, or Decoction, answerable to the Indication; and sometimes in a Purgative Powder, or Bolus.

Dulcified Sublimate.

TAke of good Corrosive Sublimate of *Venice*, as much as you please, eight ounces if you will; powder it to a fine Powder, in a white earthen Dish, pretty deep, and very even, with a glass or earthen Pestle, and be careful to stop your Nose with a Handkerchief, tyed behind your Head, for fear the vapours of the

Sublimate, should make your Head ake, or cause some worse effect. Then put to it the same weight of Quicksilver, and by trituration, or beating, incorporate them together: when they are half incorporated, add to them a spoonful of distilled Vinegar, or rather just as much as is necessary to reduce your Mass into a wet powder, and not into a paste; if you put too much Vinegar, you will have the trouble afterwards of evaporating it by the fire side, and then all the purgative vertue of the Mercury will go near to fly away, with the superfluous humidity of the distilled Vinegar. Put this powder into a small Matrass, long and straight-necked, and unluted, that you may see to the bottom; let a good part of the Matrass be empty, that there may be room for the sublimation, and that it may be performed in a shorter time with a small heat; put your Matrass upon a Round, in the small circulary Fire, and presently you will perceive some humid vapours, which rise from the Vinegar, and when they cease, then 'tis a sign that all the Vinegar is evaporated: then stop your Matrass with a Paper-stopple, the better to keep in the Spirits of the Mercury, and the Salts of the Sublimate Corrosive: continue your Fire equally till all the matter be raised, and sublimed from the bottom of the Vessel; then your first Sublimation is perfected: therefore take off your Matrass, let it cool, and then break it below the Sublimate; take out the said Sublimate, which will be all in a lump, like a Mushrom, and of a Pearl-colour, separating the Quicksilver

if any, which you ſhall find ſwimming on the top, and which has not been well incorporated with the reſt; if there be any ſpot of blackneſs about it, you muſt alſo ſcrape it with a Knife gently; and above all, you muſt take out by inclination, that is, by pouring the Quickſilver that will be got, as high as the orifice of the Matraſs; as alſo, ſcrape away a kind of greyiſh powder, which will be in good quantity in the neck of your Matraſs: ſet aſide this ſcraping, and this powder, to uſe it in thoſe Unguents, in which Mercury is required: becauſe, this black ſcraping would in a ſecond Sublimation, ſtain the whiteneſs of your Sublimate; and the greyiſh powder, would communicate a venomous quality to the remedy, becauſe in it are encloſed the ſulphureous Volatil, yellow Salts, as well of the Mercury, as of the Corroſive Sublimate; and it is in theſe Volatil Salts, that conſiſts all the malignity of the Sublimate.

This done, reduce your Pearl-colour Sublimate into powder, in a ſtone or marble Morter, and put it into a great Matraſs, luted from the bottom to half the belly; ſo that there be five parts left empty, for the Sublimate to ſtick to; ſet it in the ſame Furnace, encreaſing the heat by little and little, and taking care to keep off from the Matraſs all flaming Coals, leſt they ſhould break the Glaſs: continue this heat, till, when you take off your glaſs, and ſhake it, you perceive that little or nothing falls to the bottom. And take notice, That it is better that there ſhould remain ſomething, than that all ſhould be ſub-

lim'd; else your Sublimate being over-heated, would contract a yellowness. Thus your second Operation is ended, take off your Matrass, let it cool, and then break it below the Sublimate (which now is call'd the *White Eagle*) it appears in form of a Crown, towards the middle of the Matrass. Take out your Sublimate, and separate it carefully from all its *Fæces*, which are a red Earth, proceeding from the Vitriol, and which sticks to the bottom of the Sublimate, and also a grey powder, coming from the volatil, and venomous Salts of the Mercury, and the Sublimate Corrosive: it sticks to the orifice and neck of the Matrass. Use them both in Unguents, as it has been said, if you chuse not rather to revive all the Mercury that is in them, and make it quick again, for this same, or some other Operation. Keep this Sublimate in a glass Vial of a large orifice, and put it in, in pretty big morsels; stop it well with a Cork, and a piece of oyl'd Bladder over it, for fear it lose at last its purgative Vertue, by the evaporation of its best volatil white mercurial Salt.

It is not good to sublime it a third time, lest it lose all its purgative Vertue; nay, the more you would sublime it now, the blacker it would grow: so that, after five or six sublimations it would turn in the bottom of the Glass into a black lump, without possibility of being sublimed any more.

Obs. 1. That the Corrosive Sublimate ought to be made with Quicksilver, Common Salt, Vitriol, and Saltpeter: they make it rarely well

Vene-

Venice, from whence it is brought to us, and sold three times cheaper than we can afford to make it. The *Hollanders* send good quantities of it hither, but it is ordinarily sophisticated, by the mixtion of white Arsenick, which is very heavie, and but ten pence a pound; whereas Mercury is worth four or five shillings a pound; besides, that Arsenick being incorporated with the Sublimate, is a strong poyson. But you will easily perceive this Cheat, if you pour a little Oyl of Tartar, made *per deliquium*, upon your Corrosive Sublimate: if it be good, and without mixtion of Arsenick, it will become as yellow as Gold; if there be Arsenick, it will grow as black as Ink, Besides, the best Sublimate of *Venice*, is made into little Grains, as big as Hemp-seed: but the Sublimate of *Holland*, is in great Splinters, as Mineral, Antimony, or Bismuth; and this is, because the Arsenick cannot be so well incorporated with the said Mercury, as common Salt, Niter, and Vitriol.

Obs. 2. That we take of Sublimate and Quick-silver equal parts; because, if there were less Corrosive Sublimate, it could not corrode, and calcine the Mercury: and if there were more, it would be hard to dulcifie the Mercury: 'Tis experience has taught us this proportion.

Obs. 3. That we make use of a Glass, or white Dish, or Pan, with a glass or marble Pestle, to powder the Corrosive Sublimate: for it would whiten and spoil a brass or iron Mortar: and because in an earthen-glaz'd dish it would be black'd by the Lead of the Dish, and in an un-glaz'd one,

there would much of it be lost in the little pores of the Earth: but all these inconveniences are prevented by making use of a Marble Glass, or White-ware Dish, which indeed is but the dregs of Glass, refined and crystallized.

Obs. 4. That we use distilled Vinegar to incorporate the Quicksilver, with the Corrosive Sublimate; because, the Vinegar, having a Salt, helps the corrosion of the Mercury; and therefore furthers more their intimate mixtion, than a Liquor which had not such a Salt would do; but undistilled Vinegar, and particularly of Red-wine, is not good, because it would alter the whiteness of this Remedy. The Spirit of Vitriol is worse, for it would make it black: Spittle would do well enough, but it is dangerous to spit upon the Sublimate, lest in spitting, some of it should get into the mouth.

Obs. 5. That in the first Sublimation, we give but a gentle circulary Fire, and do thereby elevate the Sublimate, but a little above the bottom of the Matrass; because, we do not pretend at this time to any thing, but only to calcine, and incorporate the Mercury with the Sublimate. But in the second Sublimation we give a greater Fire, and raise the Sublimate to the middle of the Matrass; because then we desire to purify exactly our Sublimate from its *Fæces*, and by evaporating the malignant venomous volatil Salts have a fair crystallized Sublimate.

Obs. 6. That if in the second Sublimation when all your powder is sublim'd, you do not take your Matrass off from the Fire, it will grow yellow

yellow, and blackish; nay, the more you sublime it, the blacker it will grow; because the Mercury being devested of the purest part of its Salt, who have left behind a sulphureous smoot, begins to burn, change colour, and at last grow black.

Obs. 7. That the dulcified Sublimate is but crude Mercury, incorporated with, and calcined by Corrosive Sublimate, then devested of its own, and all the venomous Salts of the Corrosive Sublimate; but yet furnished with the mildest, and sweetest parts of them, and by them. The Vertue Purgative of this Remedy, is, as it were, whited, and sharpened. Now while the Mercury is a calcining, and purifying by these Salts, it rises more or less, according to the heat, by its own nature, which is Volatil, and by the means of the Niter, which is joyned with it. And this we call subliming; for the common Salt, and Vitriol, are hurried away, and carried up by the Mercury and Niter, and by their Nature, which is not Volatil: they keep the Mercury and Niter from rising so high, as to run out of the Matrass.

Its Use and Vertues: It purges gently, from one scruple to a dram; and if you take it four days together, augmenting your Doze, by little and little, from a scruple to a dram, it fluxes. Its particular Use is, to dissolve all scirrous, and scorbutick Tumours, both interiour and exteriour.

Turbith Mineral.

TAke two ounces of Quick-silver, well purified, and three ounces of Spirit of Niter; put them into a Glass Retort luted to half the neck, leaving a gap to look through at; place it upon a Round, in a small circulary Furnace, keeping the neck of your Retort straight, and not leaning on one side, till your Mercury be dissolved in the Spirit of Niter, which you will easily perceive through the gap you left, when you luted your Glass. When your Mercury is quite dissolved, then, to go the shorter way to work, evaporate the Spirit of Niter, your Retort being in the same posture still: but if you mean to draw off the said Spirit of Niter, then set your Retort in a distilling posture, and fit to it a Recipient, continuing your fire in the same degree as before. When the exsiccation, or drying of your Mercury shall be thus performed, take off your Vessel, and let it cool; then pour into it an ounce of Oyle of Sulphur, upon the white matter which remaines in the bottom, and then set it again upon the same fire, till all the Oyl of Sulphur be likewise evaporated; reiterate three or four times this cohobation, or rectification, with the same preportion of Oyl of Sulphur: to the end, that at last it may fire the Mercury. This done, break your vessel, and in the bottom you will find a white lump, which reduce to powder, and upon this powder pour warme water,

which

which incontinent will become yellow: reiterate this dulcoration or sweetning, till at last your water come away as insipid as it was poured on; then separate by inclination the water, which will not be tinged as the other was, and after dry your matter gently in a sand heat, and there will remain at last a powder as gellow as Gold: upon this, poure some spoonfulls of Spirit of Wine, and set it on fire, doing thus three or four times to sweeten your Mercury the more. It will be as yellow and as bright as Gold, and of no taste, and so fix, that being put into a Crucible, and melted in a Wine Furnace, it will still keep the consistence of a yellow powder, without losing but very little of its weight, which is a sign that it is well fixt.

Obs. 1. That your Mercury for this Operation, must be well purified, because the intention is to fix it, which could scarce be done, if it were impure, and mingled with Lead; besides, that being designed for a purgative in a very small Dose, it would scarce answer your intention; you will be able to judg if it be well purified or no, by putting some of it into a Stone-cup: for, if when you put a finger into it, it does not hang, and make a long thred, as a syrup would do, but is short, then it is good. If it be impure, you may purifie it by straining it through the Leather called Chamy; for, the Lead, if there be any, will remain in the leather; or else distill your Mercury in a Glasse Retort luted, in a fire of suppression, and the Mercury will remaine in the bottom of the Retort.

Obs.

Obs. 2. That we use Spirit of Niter, and not *Aqua fortis*, to dissolve the Mercury, because the said Spirit being less harmful, and corrosive than *Aqua fortis*, ought to be imployed in all preparations of Remedies that are to be taken inwardly; besides that, if we had employed *Aqua fortis*, then the Mercury must necessarily after its dissolution have become red, as it shall be taught in the Chapter of the Red Precipitate hereafter: and no other Spirit would be corrosive enough to dissolve the Mercury but Spirit of Niter.

Obs. 3. That we use a greater quantity of Spirit of Niter, then of Mercury, because experience teaches us, that the dissolvant must be in greater quantity to dissolve such a dose of Mercury.

Obs. 4. That the said dissolution requires no other than a small circulary fire: for, if the heat were greater, the Spirit would evaporate, and be gon, instead of doing its work; and for the same reason, we keep the Retort with its neck upwards, that so, if the Spirit be raised, yet it may fall down again, and dissolve the Mercury.

Obs. 5. That if you draw off by distillation that said Spirit of Niter, it may be useful to you in frictions, for the Itch, the Scab, and such like diseases, having lost its force, which would have consum'd proud flesh, excrescences, &c.

Obs. 6. That the Mercury, being dissolved, and calcin'd Phylosophically by the Spirit of Niter, after the exsiccation and evaporation of the said Spirit, the Calx of the Mercury is white

white, because the Niter being also white by nature, cannot with a small fire colour any body that is dissolved in it, but the *Aqua fortis*, makes the bodies grow red, because of the Vitriol which is in it.

Obs. 7. That upon the Calx of Mercury, we pour Spirit of Sulphur divers times, that so we may intirely fix the said Mercury, because the spirit of Sulphur is of it self fix, and farr from evaporating, when it is put in a Matrass upon the fire, it fixes part of it into a very pricking sharp Salt: and therefore, this Spirit has power to fix all Metals. The black Spirit of Vitriol, is not proper to fix, because it is of its nature volatil, and would evaporate all away, as for its salt at least; and there would remain nothing but a *Caput mortuum*,: and observe, by the by, that Mercury passes here through two the noblest Operations of Chymistry; for first, it is dissoved by the Spirit of Niter, and then coagulated by the Spirit of Sulphur.

Obs. 8. That by pouring warm water upon this calx, it presently grows yellow, because the Oyl of Sulphur has communicated to it the Sulphureous yellow colour; and the water being actually warm, dissolves and extracts the Salts who were incorporated in the said Calx.

Obs. 9. That by burning Spirit of Wine over the said Mercury, you dulcifie and sweeten it, and make its purgative vertue gentler; because, the burning Spirit of Wine, penetrating the said Mercury, carries away with it, in the burning, all the Venemous volatil Salt that could be left.

Obs.

Obs. 10. That *Turbith Mineral* is nothing but Mercury dissolved, and calcin'd by the Spirit of Niter, then fixt by the Spirit of Sulphur, then devested of the salts of its dissolvants by reiterated lotions, and freed from its malignous Sulphur by the flagrations of the Spirit of Wine.

Its Use and Virtue: It purges strongly, and often provokes Vomit, from three to six grains; it cures the Pox without fluxing, because being fix, it cannot rise to the mouth, as all other preparations of Mercury that have not bee fixt do. It is nevertheless very violent, because it is not so fixt, but there yet remaines a little un-fixt mercuriall Salt, and Sulphur, who are sharpened by the Spirits of Niter and Brimstone: and indeed, if all of it were fixt, then nothing of it could be dissolved in the stomack, and so would produce no other effect, than as much Gold in powder; also, being not altogether Volatil, its Vertue is less harmfull.

The White Precipitate.

TAke of pure Mercury eight ounces, and of *Aqua fortis* sixteen, put them into an unluted long necked Matrass, and of such a size, as it be not half full, least when the Mercury and *Aqua fortis* are in dissolution, there should be so great an ebullition, as to cause the matter to run over:

over: stirr a little your Matrass with your hands, to heat the *Aqua fortis*, then set your vessell on warme ashes, to help a little more your *Aqua fortis* in its action upon the Mercury: but have a care you give not a greater heat then is necessary for a gentle ebullition; for, if your *Aqua fortis* be over heated, and opened, it will tinge (by the means of its Vitriol) your Mercury in a yellow colour: as soon as your Mercury is entirely dissolved, which may be done in half an hour, pour your dissolution into an earthen Stone Pan, or glass Bell (the glazed earth being unfit, because the *Aqua fortis* would dissolve the Vernish) then pour upon your matter cold sea-water, well filtrated, and impregnated with common Salt undecrepitated; you may use about a quart of this Water, till your dissolved Mercury be all precipitated to the bottom of your Vessel, in a white powder. And take notice, that if you had used common water, you would not have precipitated your Mercury, but turned your dissolution into a white Liquor, which would have discharged it self of a white sharpe powder: because that common water, having no salt, cannot fight with the salts of the *Aqua fortis*; but if it be impregnated with a contrary salt, there arises a conflict, during which the Mercury scapes, and falls to the bottom, leaving behind him a good part of his salts. This done, separate by Inclination your sea-water, and pour a great quantity of common water upon your matter, to take away the *Acrimony*, which the *Aqua fortis* by it Niter and Vitriol has communicated to the Mercury,

and

and continue this, till your water come off insipid. Then, having pour'd off your last water, filtrate the remainder in a brown, or rather white Paper, to preserve the colour; and dry your Precipitate in the shade: for, if you do it in the Sun, or by the Fire, it will lose much of its whiteness; when it is very dry, keep it in a close Vial, well stopped, and covered with an oyl'd Bladder.

Obs. 1. That though this Remedy be taken inwards, yet we use *Aqua fortis*, and not Spirit of Niter; because, *Aqua fortis* costs less, and is sooner made than Spirit of Niter; which undoubtedly, without this reason of sparing, would be much fitter for this Operation: yet, we think that the great Lotions that are made, do dulcifie it, as if it had been prepared with Spirit of Niter.

Obs. 2. That we take as much again of *Aqua fortis* as of Niter; as well, because the dissolvant must be stronger than the thing dissolv'd, as because that Experience teaches, that such a Dose of *Aqua fortis* is necessary to dissolve the Mercury entirely.

Obs. 3. That the Matrass must be long necked, that the *Aqua fortis* rais'd by the heat, to the middle of the neck, may cool, be condensed, and fall down again; for, in this Operation, we pretend to nothing, but to dissolve and calcine Philosophically, and lightly, the Mercury, without penetrating its Body, and opening it by the Salts of the *Aqua fortis*, as we mean to do in the Red Precipitate: and thence it comes, that this Mercury, after its precipitation, retains its white colour, and the nature of Quicksilver.

Obs. 4.

Obs. 4. That if you pour hot Sea-water on your Dissolutions, then you will not be able to precipitate entirely your Mercury; because, that the salt Sea-water, being sharpened by an actual heat, would penetrate and dissolve a part of the said Mercury, in stead of precipitating it.

Obs. 5. That to make Sea-water, you must not take decrepitated Salt; because, it would be to no end to take away the flegm, since you are to put it into Water; and as for purifying it, filtration will do that.

Obs. 6. That the White Precipitate, is nothing but Mercury opened, and calcined by the *Aqua fortis*, and retaining but very little of the Salts of the said *Aqua fortis*, the rest being carried away by the dulcorations.

Its Use and Vertue: It is the gentlest of all the Purgatives drawn from Mercury, though it be dissolved by *Aqua fortis*; because it has been sweetned by Lotions: It purges nevertheless more violently than the sweet Sublimate, and its Dose is less: For, to Children it is from three to six Grains; and for Aged persons, it is from six to fifteen: It cures the Pox taken interiourly, and being dissolved with Oyl, it may be exteriourly used by Frictions, to cure the Itch, *&c.* This Remedy fluxes as easily as the sweet Sublimate; because, the Mercury being unfix'd in these Preparations, has his wings left him, wherewith he presently flies upwards, in stead of purging by Stools.

The

The Red Precipitate of Mercury.

Put four ounces of good Quicksilver, and six ounces of *Aqua fortis* into a Matrass, luted from its bottom to half the belly: set your Matrass on a Round, in a small circulary Fire; give a gentle heat at first, lest you should cause too great an ebullition; then encrease it, by little and little, till your *Aqua fortis* be evaporated; and you will know if your *Aqua fortis* be evaporated, by laying upon the mouth of your Matrass a piece of Brass, or any other Metal: for, if it be not wet, then it is a sign that all the humidity, proceeding from the *Aqua fortis*, is evaporated: then encrease the Fire, putting live Coals round about the Glass, as high as the Lute goes, and continue the Fire, till your Mercury rise upon the brim of the Matrass, in form of a yellow Soot, and that a piece of yellow Metal set over this vapour, do grow white by rubbing of it; and that is a sign that the Operation is ended: therefore take off your Glass with all speed, else your Mercury would all vanish away in this smoak. Your Matrass being cold, must be broken a little above the matter, and you shall find in the bottom an Orange-colour lump, the same in weight as the crude Mercury you used at first: and this is it, which we call a *Red Precipitate*.

Obs. 1. That if perchance the middle of this lump were of a whitish colour, then that is a sign that the Operation is not perfect; and therefore, you must

must reduce it to powder in an Iron Mortar, and reverberate it in a Crucible, with a Fire of Suppression, till it become right Orange-colour.

Obs. 2. That you must not give the Fire so long, till your lump be red; because, then your Mercury would lose all its corrosive Salts, and therefore would be disabled from consuming proud flesh, which is its principal Vertue.

Obs. 3. That we use here *Aqua fortis* to calcine Mercury, because the Remedy which we intend is a Topick exteriour one, to corrode, and consume all superfluous fleshly Excrescences; and it is necessary, that it should be in greater quantity, than the Mercury, to dissolve it entirely. Moreover, calcin'd Mercury does not retain its natural whiteness; because, the Vitriol of the *Aqua fortis* communicates this tincture, and because that the Fire here, is much more violent, than that which is us'd in the preparation of the Remedy, call'd *Turbith Mineral.* The dissolvant being also much more over-heated, and penetrating by the help of the Fire, communicates a sulphureous colour.

Obs. 4. That the Precipitate is found to be equal in weight to the Mercury, that was dissolved; because, though in this Operation it have lost something of its volatil part, yet it hath impregnated its self with some of the Salts of the *Aqua fortis*, as much as to make up the weight: and these Salts it will keep, till it be reviv'd, and made Quicksilver again.

Obs. 5. That the Red Precipitate of Mercury

is a Mercury dissolv'd, and calcin'd by *Aqua fortis*, and then charg'd with the sharpest part of the Salts of the said *Aqua fortis*.

Its Use and Vertue: It is lightly caustick, and escarotick, or consumptive; and therefore eats away all proud flesh, and excrescences: and to mollifie it a little, it is mingled with some Unguent; as the *Basilicum*, &c. It is good to cleanse Ulcers; it is useful likewise in the preparation of the *Arcanum Corallinum*.

Arcanum Corallinum.

Put as much Red Precipitate as you please into a glass Bell, pour upon it a good quantity of warm Water, not too hot, for fear of breaking your Vessel; and do this often, till at last your Water come away sweet and insipid; then having poured off your last Water, put your Precipitate into a little glass Cucurbite, and twice as much Spirit of Salt in weight, as there is Precipitate; set your Cucurbite in a Sand-fire, with its Head and glass Receiver fitted to it, to draw off by distillation the flegm of the Spirit of Salt: in the mean time, the volatil Salt of the common Salt, which composes the Spirit of Salt, will remain in the bottom, and be incorporated with the Precipitate of Mercury, and so fix it, as to make it able to endure a reverberatory Fire, without evaporation; on the top of this Mercury there is a white Crust, which is the grossest part of the Spirit

Spirit of Salt that is corporified. Pour upon all this, some cold Water (as soon as your vessel is cool) to the end you may dissolve this grosser Salt, and draw it off from the Mercury; reiterating thus your Lotions, till your Water come off insipid: then put your Mercury (which is of a dark yellow) into a Crucible, and reverberate it in a small reverberatory Furnace, till it become as red as Corral: and in this reverberation, the Salts of the common Salt, which were incorporated in the Mercury, do evaporate, and leave the Mercury in the same weight it had before its first Lotion: and nevertheless, the Mercury is fix'd by that little of these Salts which it enjoyes. This done, put the said Mercury into a Dish of Earth glazed, and pour upon it good Spirit of Wine, two or three Fingers deep, which set on fire, till it be consumed, and so reiterate once more the said Flagration, to the end that the purgative, and vomitive Vertues of the Mercury, be milder by the evaporation of the volatil, and venomous part of the said Mercury, and its Salts.

Obs. 1. That we wash the Red Precipitate with luke-warm Water, to the end, that all the sharp Salts that are in the said Precipitate, be dissolv'd the better; and by these reiterated Lotions, it becomes at last as sweet, as if it had been prepar'd with Spirit of Niter, in stead of *Aqua fortis*.

Obs. 2. That the Spirit of Salt, as well as the Spirit of Sulphur, has the vertue of fixing Mercury; because, the Mercury it self too is naturally fix'd; being therefore opened, & intimately pene-

trated by the Spirit of Salt, the said Spirit communicates to it its fixative vertue, and is it self fixed in the Mercury. And observe, that the Spirit of Salt has un-dyed the Red Precipitate, and made it of a dark yellow; because the common Salt, being by its nature all white, and coming to mingle with the Orange-colour, must needs clear it, and give it this yellow.

Obs. 3. That the *Arcanum Corallinum*, is nothing but Mercury calcin'd and dissolv'd Philosophically by *Aqua fortis*, then fix'd by Spirit of Salt, and devested by washings, from the most malignous part of its Salts, and of the volatilest part of its substance, by reiterated flagrations of Spirit of Wine.

Its Use and Vertue: It purges, and sometimes procures a Vomit, gently opening, and unstopping at the same time the passages, and dissolving all the hardnesses of the schirrous parts: alone it cures the Pox, without fluxing, because it is fix'd: The Dose is, from three to six grains.

The Crocus Metallorum, *or Liver of Antimony.*

TAke of Female Antimony one pound, and half a pound of common impure Niter powder them, and mingle them together; in the mean time heat red-hot upon two Bricks, in a great Fire of Suppression, a large and capacious Crucible, or Camion: throw into this, with a great

great Iron Ladle, a quantity of your matter, and cover presently your Crucible, keeping it covered, till all the smoak cease: continue this Projection, and Flagration, till all your matter be consumed. This done, encrease the Fire, and stir with a stick your matter continually, till it be all melted: then take it off from the Fire, and pour it into a Brass or Iron Mortar, hindring as much as you can the *Fæces*, which swim upon the top, from going into the Mortar; this liquor will congeal into a lump, which, when it is cold, you may break into many pieces, as glistring, and shining as Steel, or as burn'd Liver: then, if you powder them, they will change into a Saffron-colour'd powder, not unlike a diseas'd bilious Liver: and thence it is call'd the *Saffron of Metals*. As for the *Fæces*, remaining in the Crucible, you must throw them away as useless.

Obs. 1. That you must take Female Antimony, as being the worst, and you may know it, by its long bright white Needles; as also, because it is much more brittle, than either the Male or Mineral Antimony. The Male is better than the Female, and is known by its little blue, yellow, green Needles, diversified in colours like a Rainbow. The Mineral Antimony is the worst of all, because, not having been melted, it has not lost any of its volatil substance, in which consists all its malignity. It is distinguished easily; for, it is full of the Rock out of which it is drawn. When you melt Mineral Antimony, the Male goes to the bottom. In this Operation of the *Crocus Metallorum*, Female Antimony is good enough; be-

cause, the Remedy resulting from it is none of the best of Chymistry; you may use the Male if you will, but have a care you do not use the Mineral; because, being loaded with Earth and Rock, it would not melt with so small a quantity of Niter.

Obs. 2. That you must take common Niter, not purified, but such as comes from the first washing; because, it is good enough to put the Antimony in fusion; and because, its *Fæces* being to be mingled with the *Fæces* of the said Antimony in the melting, it would have been superfluous to have purified the Niter beforehand; yet, if you will be at the charge, purified Niter will do no harm, it will rather be better.

Obs. 3. That you must powder your Antimony, and Niter, and mingle them well together; that so, they may the easilier take fire.

Obs. 4. That you must not use a glaz'd Pot, or Crucible, lest the enflamed matter should corrode, and melt the Lead of the Pot.

Obs. 5. That you must not throw your matter into your Crucible, till it be red-hot, else your Niter would not take fire, and so would not be able to put your Antimony in fusion.

Obs. 6. That you must not throw all your matter at a time into the Crucible; for then, the fusion of your Antimony would not be well performed; because, the Niter by so great a flagration, would exhale, and be gone, before it had melted the Antimony.

Obs. 7. That after every Projection, you must cover your Crucible very close, to the end you

may keep in the enflamed vapours of the Niter, who by their circulations, do the better contribute to the melting of the Antimony.

Obs. 8. That after all your matter is consumed, yet you must encrease the fire, because the Antimony is but half melted by the said flagrations: but, being already opened by the Niter, it soon melts, if the fire be encreased: and in the mean time, you stir it well, that so the Antimonial Liquor may go to the bottom, and be free from its *Fæces*; and therefore, we use a stick, and not any thing of Iron, because the said Liquor would corrode the Iron, as we may perceive in the *Regulus* of *Mars*; where the Antimony dissolves, and eats the filings of Iron, that are added to it. Besides, you may freely put the said stick to the bottom of your Crucible, because you do not mean to hinder the *Fæces* of the Antimony from going to the bottom; and therefore, both melting together, descend likewise together, and only the *Fæces* of the Niter swim on the top of the melted Antimony.

Obs. 9. That the Liver of Antimony, or *Crocus Metallorum*, is nothing but Antimony opened, and melted by Niter, and not devested of its terrestreity, but full of its malignant purgative, and vomitive Sulphur: therefore, we have used but half the quantity of Niter, to a double proportion of Antimony, and we have let it stand no longer upon the Fire, than was necessary to melt it, with the fixt Salt of the Niter remaining in the Crucible.

Its Use and Vertues: We seldom or never use

the Liver of Antimony, till we have made it *Crocus metallorum*, by pulverisation. It is a Moderate vomitive, betwixt violent and gentle, and purges too, at the same time. This powder serves ordinarily to make the *Vinum emeticum*, or emetick Wine, by putting one ounce of it to infuse in a quart of white Wine, Sack, Beer, Cider, *&c.* the Dosis of this drink, will be from one to two ounces, to take at the mouth; and from four to six ounces, in an emollient decoction, in a Clyster, without dissolving in it any thing else.

The Regule of Antimony.

TAke three pound of male Antimony, one pound and a half of common Niter, one pound and a half of Tartar, and four ounces of Wood Coals; in the mean time, heat red hot a great Crucible, in a great circulary fire of suppression, then throw in your matter by parcels, with an Iron or wooden-ladle, and cover your Pot, or Crucible, at every time, till the smoake be past; then, when your Crucible is almost full, encrease your fire, and with a stick, stirr your matter from time to time, that so the purest part of the Antimony, may go to the bottom; but, doe not put your stick to the bottom of the pot, lest the Regule, which is in the bottom, should be mingled with

its

its *Fæces* that swimm on the top; continue doing thus, till all your matter be melted, which will be in half an hour or there abouts. Then, if you have any of your first matter left, for which there was not roome in the Crucible, you may make an end of it, and put it to this, observing the same circumstances: when all is melted, give a violent fire for a quarter of an hour; to the end, that the most harmeful part of the Antimony may exhale. After this, take off your Crucible, set it upon a hot brick, for a cold one would goe near to break it, because of its humidity: Your Crucible being cold, break it, with a hammer, and in the bottom you will find your Regulus congealed in a lump, of the proportion of the bottom of the pot, as white as silver, very smooth underneath, and sometimes starred above in its superficies: on the top of this Silvery lump are the grayish *Fæces*, dry and spoongious, and in good quantity, and marked also with the Starre: but when the Starre fails, the Regulus is as good, as if it had not faild; for the Starre is produced, but by a long fusion, which straightning it, does also diminish something of its purgative, and emetick vertues, by the too great evaporation of the flowers, and volatil Salt of the said Antimony.

Obs. 1. That you must preserve the *Fæces* of your Regulus; for out of it you must draw the Golden Diaphoretick Sulphur, as shall be said hereafter.

Obs. 2. That we use here the Male Antimony

mony as best, because here we aime at a more excellent remedy, than the *Crocus Metallorum.*

Obs. 3. That we use here common Niter unpurified, for the reason alleadged in the Chapter of the Liver of Antimony.

Obs. 4. That we here make use of Niter to open and set in fusion the body of Antimony, though we do also imploy the Tartar to hinder a too great ebullition of the said Antimony, because, the Niter being somewhat busie in calcining the Tartar, cannot employ all its force upon the Antimony; besides, the Tartar being not inflameable by it nature, hinders the Niter from causing this ebullition; and being withall a gentle Salt, it purifies, cleanses, and whitens the Antimony. Then we use Wood-Cooles in powder for the same end, and because also the Coales being spoongious, are apt to draw to themselves, and retain the *Fæces* of the Antimony. Now it is very necessary in this Operation, to prevent the ebullition, lest the Antimony should run over the pot, and be lost, we use also but one proportion of Niter to two of Antionmy, for fear the flagration should be too quick, and we keep all the matter longer upon the fire then we do the *Crocus metallorum*, to give the Regulus time to saparate from its *Fæces.*

Obs. 5. That you must powder, and mingle together the said matters; that you must not make use of a glazed pot; that you must not put in your matter, till your pot be red hot: that you must not put it in all at a time, but by little and little; and that presently after every projection,

jection, you must cover the Pot with its cover: That you must stirr your matter with a stick, for the reasons alledged in our observations upon the Liver of Antimony.

Obs. 6. That the Regulus of Antimony is nothing but an Antimony opened, and melted by the Niter, somewhat more intimately, then the Liver of Antinmoy; because of the addition that is made here of the Tartar and Charcoal; and also, by reason of the continuatiou of the fire, which devests it of its terrestreity, and of a good part of its venemous Sulphur, and flowers: but yet it is endowed with a great emetick, and purgative vertue. Therefore we have not used here much Niter; and though the fire has been more violent then in the Liver of Antimony, yet it has not been strong enough to banish all the vomitive and purgative vertue, as shall be done in the Diaphoretick Antinomy.

The Vertues and Use: It is a milder vomative, and a gentler purgative, than the *Crocus metallorum*: and it is used in three different waies. 1. It may be powder'd and infus'd, and so make a *Vinum emeticum*, as has been said in the *Crocus metallorum*. 2. We make of it eternal Pills. 3. We make Cups of it, in which Wine infus'd, becomes purgative, and emetick. 4. It serves also to make the Diaphoretick, by calcining it with Niter, either in a fire of suppression, or in the Snn-beames by a burning-glasse.

To make the everlasting Pills, you must have a Mould for leaden Bullets, of the bigness of an ordinary pill: lute, with our Lute, the lower parts

parts, and all the sides of your Mould, to the end that your melted liquor being thereby kept in, may be fitly and handsomely shaped into the forme of Pills; then take as much as you please of your Regulus, and put it into an iron melting spoon, with a long handle: which set, upon a great fire of suppression, or in a winde Furnace: cover the said spoon with a dry Tyle, not a wet one, least it should fly, then pour coals upon your spoon, thus covered, and give a melting fire, till your matter be red hot, and perfectly melted, and as shining and bright as quicksilver; then pour gently your matter into your mould, and when it is cold, take out your Pills, which stick all one to another; seperate them; and with a knife even them so, as they may have no unequall parts, which might hurt the throat, esophage the Maw, the Guts, or the Fundament.

One of these Pills may serve you for ever, taking it out of the close-stool; and then making it clean for another time: for one Pill of a dragm has the same effect, as the ordinary dose of *Vinum emeticum*, and works as well, as if you took three or four of these Pills at a time.

As for the mould of the Cup, it must be of sand and can serve you but once: your Cup must be as thick as a Crown piece: you must make your addresses to those that cast Bells, to make you a mould: you may make one of Brass, but it will cost you too much, and yet will not do so well as one of sand.

The

The Regulus of Mars.

TAke two pound of Male Antimony, one pound of Tartar, and as much of Common Niter, two ounces of Charcoal, and six ounces of filings of steele, or iron, powder all these, & mingle them well together, & operate in the same manner, as you did in making the Regulus of Antimony. The Operation done, will produce you thirteen ounces of Regulus, proceeding from Seven ounces of Antimony, & six of filings; whereby you may perceive, that the Antimony looses much of its smooty Sulphur, and its sulphureous malignant flowers.

Obs. 1. That we add here the filings, to the end we may fix the vomative quality of Antimony, but you must not put above three ounces to each pound of Antimony, lest it should be so fixt, as to lose it purgative vertue, and contract the nature of a metal.

Obs. 2. That we employ, not so much Charcoal in this Regulus of Mars, as in the precedent Regulus of Antimony, in recompense whereof we put the filings, which produce the same effect.

Obs. 3. That out of the *Fæces* of this Regulus, is also made the golden Diaphoretick Sulphur.

Obs. 4. That the Regulus of Mars, is nothing but Antimony perfectly opened by Niter, and devested of its venemous qualities by a long fusion, though not long enough, to evaporate, all

all its purgative Sulphur. Its Emetick vertue is fixt, by the Addition of Mars.

Its Use and Vertue: It purges gently by stool without provoking to vomit; if it be infused in white Wine, or if you make of it everlasting Pills, or Cups, in the same dosis and methods we have described in the Regulus of Antimony. Nay more, if you powder one pound of it, and tye it up loosely in a course linnen, and then let it infuse in a quart of the decoction of sudorifick Woods, and Roots, you may cure the Pox without fluxing by Mercurial remedies. There is also made with the Regulus of Antimony, and Niter calcin'd together, an excellent Diaphoretick Antimony; but observe, that that which is made, either with crude Antimony, or with the Regulus of Antimony, provokes vomiting, except it be very well washed; whereas that which is made with the Regulus of Mars, never incites to vomit.

The golden Diaphoretick Sulphur.

TAke of the *Fæces* of Regulus Antimony, or of the Regulus of Mars, and boil them a quarter of an hour in common water, in a Brass kettle, to make thereof a dark yellow *Lexivium*, which filtrate through a brown Paper. Gather together all your filtrations, and put them into a glasse, or stone vessel, but not into a glazed earthen

then one; lest the Salts of your matter, should corrode the Lead, or Vernish, and so black your powder; then pour upon them two or three spoonfuls of Vinegar, or Spirit of Niter, Vitriol, or Sulphur, or some other acid; the stronger it is, the higher will be the colour of your Precipitate; for, these acid Spirits do much more vivifie colours, than Vinegar does. You will see presently, that your *Fæces* will curdle, become yellowish, and stink; your Curd being setled, pour away the Liquor, which you may keep to wash your Bedsteds withal, to keep them clean from Punaises: then upon your Curds, throw common Water, and you shall see them precipitate into a powder of a Saffron-colour. Pour away this first Water, and pour on some more, in great quantity, that you may at once sweeten your powder, and take away from it its ill smell, and its emetick vertue; then having poured away this last Water, filtrate the residue through a brown Paper, in which let it dry at leisure in the shade.

Obs. 1. That the *Fæces* of both these Reguluses, do contain a Sulphureous smoot of Antimony, and a fix'd Salt of Niter and Tartar: therefore common Water is easily impregnated therewith by ebullition.

Obs. 2. That the Acid, which you pour upon the said *Lexivium* filtrated, produces three different effects; of which the first is, To separate the sulphureous and saltish Smoot, from the common Water, and so it appears in Curds. The second is, To give a gross yellow colour to the Curds

Curds and Water. The third is, To make the said Curds and Water stink abominably. It produces the first effect; because, that the Antimonial Sulphur, dissolved by a saltish and lexivial dissolvant, remains incorporated with him, till you pour in a little of a salinous Precipitant; which being of a different nature to the dissolvant, it happens that these two Salts, thus mingled, begin to whet one another, and by their action, and re-action, cause an ebullition, evaporation, and dissipation of the sharpest part of the dissolvant. So that growing weak, he is forced to let go his hold, and suffer the body he had seased upon, to fall away to the bottom of the Vessel. The Acid produces the second effect; because all Acids do enliven, and enlighten colours; now the colour of Sulphur is yellow, from whence it comes, that this Antimonial Sulphur, which in its dissolution was of a dark yellow, in its precipitation, becomes now of a fine light yellow. Now all salinous Spirits, do vivifie colours, because, they are of a detergent nature, and do cleanse, and take away all the greasie, obscure smoot, which did darken the lustre of the natural colour, as linnen grows white and clean by bucking. The Acid produces the third effect; because Sulphur, when it is heated, is naturally stinking; now it is heated by the action of the Precipitant, and re-action of the Dissolvant: This may be observed in the hot waters of Mineral Baths, which stink extreamly of Sulphur; because a bituminous and a sulphureous spring, happening to joyn with a nitrous, and vitriolous spring,

do

do whet, and heat one another, and so produce the sulphureous smell.

Obs. 3. That if you pour a good quantity of common Water upon these Curds, that presently they are precipitated into a yellow powder; because, the said Water dissolves all the Salts that remained in the said Curds; so that then the Antimonial Sulphur, being free from all tyes and bonds, precipitates it self into a powder of a much livelier colour, than that of the Curds: because, now the Sulphur has thrown off the Salts, and appears under its own natural colour of Sulphur.

Obs. 4. That the golden Diaphoretick Sulphur, is nothing but a fix'd Sulphur of Antimony, drawn from the *Fæces* of Antimony, opened and melted by Niter: for, the volatil Sulphur of Antimony is so much the more venemous, as it is volatil; and that which is least volatil, is violently vomitive and purgative: but, this being fix'd, is only diaphoretick and opening: and for a proof that the said Diaphoretick Sulphur is but a fix'd Sulphur of Antimony, do but let the said *Fæces* of the *Regulus* of Antimony lie two or three days upon the ground, and there will rise of it self, without any Artifice, a kind of a yellow Moss all over your *Fæces*, which is nothing but the true Sulphur of Antimony purified.

Its Use and Vertue: It is a powerful Diuretick and Diaphoretick, it serves principally to provoke the Monethly Courses of Women, being taken in the weight of twenty or thirty Grains, either alone, or with Saffron, Savin, and Sene,

of each ten or twelve Grains, infusing them twelve hours in White-wine, and so continuing for two or three dayes together; to the same end, may be received by a Tunnel, the vapour of the *Lexivium* of the said *Fæces*, before their precipitation into Curds. And take notice here, that if the said Powder have not been carefully wash'd and sweetned, that it may chance to purge, and provoke vomit too.

The Diaphoretick Antimony, or the Diaphoretick Mineral.

TAke one pound of Male Antimony, or of the Regule of Antimony, or of the *Regulus* of *Mars*, and four pound of pure Salt-peter; powder them very fine, and search your Antimony through a silk Sieve; then mingle them together, to the end the Niter may well inflame the Antimony; in the mean time, set a Camion, or great Crucible upon a Round, in a great circulatory Fire; when your Crucible is red-hot, then with a wooden Ladle, throw in a Ladle full of your matter, cover your Pot to keep in the smoak; which being past, do as at first, and put in another Ladle full, so continuing, till you have consumed all your matter; then continue the Fire, taking off the cover from your Crucible, till there come out no more vapours, which will be in half an hours time; after which, take off your Crucible: for, if you did let it stand any longer, your matter would become a red

red Liquor, which being cold, would ſettle in a lump, like the Liver of Antimony, and would have the ſame Vertues, becauſe the exceſſive heat would have opened its body a-freſh: then, take out your matter by Ladle-fulls, with a Tin Ladle, and throw it as hot as you can, into a great ſtone Pan, full of cold Water; and do not throw it in of a ſudden, leſt ſome of the matter ſhould ſparkle upon your hands and face; but dip in your Ladle by little and little; when you have done all your matter, then waſh your hands, and with them ſtir and break the ſaid matter, precipitated to the bottom, till the Water become as white as Milk, and your matter as ſmall as you can make it. Separate by Inclination the ſaid milkie Water from its *Fæces*, who are a fix'd Niter, undiſſolvable in Water, and which you may throw away: Let this milkie Water ſtand three or four hours, to the end, that all your white powder may precipitate to the bottom; then ſeparate by Inclination this Water, which will be good for the Itch; then pour on more Water, and do ſo, till it come away inſipid. Having poured off the laſt Water, there will remain a kind of white Pap, which put into a Coffin of white Paper, over a glaſs or earthen Veſica, ſo all the Water will run into the Veſica, and there will remain a white lump, which you muſt dry leaſurely in the ſhade, upon the bottom of a Sieve. Being very dry, and in little white brittle pieces, you may keep them ſo, or powder them, and put them into a glaſs Vial, well ſtopped. If you deſire to reduce this Magiſtery into Trochiſhs, you may do thus. When

it is yet Pap, put it into a glass Tunnel, and stop the bottom of it with your finger, till your matter be settled; then let go your finger, and let your matter drop out, in drops, upon a Marble, and so it will be formed into Trochisks; dry them in the shade, and not in the Sun: for, the reverberation of its beams, would alter the white colour, which is the beauty of these Remedies: all Magisteries may be trochiskated in the same way, and then must be kept in a glass Vial well stopp'd.

Obs. 1. That in this Composition, we make use of Male Antimony, rather than of the Female; because, being heavier, it is better; and for the same reason we use the *Regulus* of Antimony, and rather the *Regulus* of *Mars*, because it is already more purified of the venemous part of its volatil substance. Now in this Remedy we do pretend, that all that part of the Antimony which has been opened by the Niter, is absolutely devested of its purgative and emetick substance, that is, of all its volatil Salt, and Sulphur: therefore we ought not to use the Female Antimony, which has more of this volatil substance than the Male. But the *Regulus* of Antimony is better; because, as it is devested, as well of a considerable part of its volatil substance, as of its terrestreitie, it is fitter to be purified, and entirely refin'd from all its malignous qualities: and yet the *Regulus* of *Mars* is best of all; because, in it the emetick Vertue is already fixed by *Mars*, incorporated with the Antimony. You must also take notice, That they that seek the Philosopher's Stone

Stone in Antimony, prefer Mineral Antimony before all others, thinking, that becauſe it has not been melted, it is impregnated with all its vertue; and therefore ought to be uſed alſo in this Operation: but without diving any further in this Well of *Democritus*, I will only ſay, That for the uſe of Phyſick, Mineral Antimony is the moſt malignant of all, and it is deveſted of theſe ill qualities, only by long and reiterated fuſions and evaporations.

Obſ. 2. That we uſe here very fine Niter, becauſe we are not only to open, and melt the Antimony (for common Niter would do that) but alſo to ſo penetrate the Antimony, as to cauſe an evaporation of all its volatil, purgative, and emetick ſubſtance. Now common Niter cannot do this, becauſe, having a terreſtrious ſubſtance, and a fix'd Salt in its ſelf, it would not be fit to maintain a long and penetrating fuſion.

Obſ. 3. That for the ſame reaſon we put three times as much Niter upon the ſaid Doſis of Antimony, and for the ſame reaſon we keep the Antimony, and the Niter upon the Fire half an hour after their Flagration and Projection, till all the ſmoak be vaniſhed, and with it, the emetick and purgative qualities, which the Niter had opened, and ſet looſe in the Antimony: but, if after that, you continue your Fire, it will produce the ſame effect in the Antimony, that the Niter did; that is, it will diſcover, and bring forth a new emetick, and purgative vertue, as we ſee it is done in the *Vitrum Antimonii*, or glaſs of Antimony, and yet not be able to make it evaporate: for, that

belongs to Niter to do: and by this you will perceive, that one must be a good Artist, that prepares this Remedy well.

Obs. 4. That you must with all the care imaginable, wash, and edulcorate your Magisterie of Antimonie, else in stead of being simply diaphoretick, and opening, it would prove vomitive; because, that though the volatil part of your Niter has carried away with it all the volatil substance of the Antimonie, that it had un-chain'd, and set at libertie, yet the fix'd Salt of the said Niter, remaining in the Antimonie, retains some part of the emetick substance; therefore, it is necessary, by frequent Lotions, to dissolve the said fix'd Salt, and so extract it. And here again, you see the great pains and care that an Artist is at, in preparing of this Remedy, so excellent, and so much used.

Obs. 5. That the Diaphoretick Antimonie, is nothing but an Antimonie most intimately penetrated, and opened by Niter, and all its emetick and purgative vertues evaporated, and carried away with the said Niter, by a long and great Fire, and then afterwards edulcorated by washing and Lotions.

Its use and Vertues: 'Tis a powerful Diaphoretick, and an excellent Diuretick, apperitive, and desopilative: it is used with good success against all Venereal Diseases; as old Gonorrhæa's, being mingled with some *Venice* Turpentine, that has been brought to the consistence of *Colophone*, as we shall teach in the Chapter of the Diuretick Pills. It is very good against the Small Pox, in the weight of a Five Shillings piece of Gold, in Wate

Water, or ſyrup of Cinamon, taking it three daies together, to make the ſmall pox come out, and dry; againſt all opilations, and tumours of the ſpleen, the Pancreas, and the Meſenterie; incorporating it with the Salt of Tamaris, the *Mercurius dulcis*, the *Crocus martis apperitivus*, and ſcummed Honey, as it is here frequently practiſed with good ſucceſs.

The Black and Acid Oyle of Antimony.

TAke of Antimony, fine Niter, Brimſtone, of each one pound, powder them and mingle them well together; then fire this mixtion, in the ſame way, and manner, and in the ſame Veſſels that we taught to make the Spirit of Sulphur in. There will riſe a vapour, as red as bloud, and there will ſtick to the ſides of the Bell, and of the Pan, and upon the ſurface of the water, a little skin of the ſame colour: all your Matter being conſumed, take your red flowers & mingle them with your water, which is already impregnated, with the acid Spirit of theſe three Minerals. Put all this into a glaſs Matraſs, unluted, and let it be but three quarters full. Poſe your Matraſs on a Round, in a ſmall circulatory Furnace, continuing a gentle fire, till your flowers melt, and goe to the bottom, and that there appears no Sulphur

swimming upon the Liquor, which will look thick, and of a red dark blackish colour: but take care, that the ebullition be not such, as to run over, or break your Matrass. Tis in this case, that one must be a good Artist, and acquire by attention, reason, and experience, a way of Operating surely, and easily. This done, take off your Matrass, and pour out your liquor very hot into a white earthen Pot. When it is coole, separate by inclination the black and acid Oyl, and you will find in the bottom of your Pot a congealed lump of yellow reddish Sulphur, keep the said Oyl in a Glass, well stop'd, and keep your Sulphur to serve you in the making of the Salt of Brimstone.

Obs. 1. That Niter is here used to open the body of Antimony, the Brimstone is employed to fix its emetick quality; and the Brimstone, if it were not joyned with Niter, would not be able to inflame the Antimony: for the Brimstone being stifled in these vessels, would presently go out, but the Niter once a-fire, though afterwards stifled, yet sets the other combustible bodies that are with it, a-fire also, till they be consumed.

Obs. 2. That the smoake and Flowers of this Matter are red, because of the Sulphur of the Antimony, which is redder than ordinary Sulphur, and so communicates its redness to the ordinary Sulphur; it is not the Niter that gives this colour: for, we see that in the Diaphoretick Antimony, it whitens the Antimony.

Obs. 3.

Obs. 3. That this Oyl of Antimony is of a blackish red, because of the yellow tincture of Sulphur, mingled with the black tincture of Antimony: and this Oyl is acid, because of the Spirits of Sulphur and Antimony, which both are acid: for, as for the Spirits of Niter, they are all evaporated with the water, in which they were, and the Spirits of Sulphur remain to fix those of Antimony.

Obs. 4. That the black and acid Oyl of Antimony, is but an acid Spirit of Antimony, fixt by the Spirit of Sulphur.

Its Use and Virtues: 'Tis a good diuretick, and desopilative; it purges gently without provoking vomit: the Dosis is, from three to six drops, in a Glass of a Laxative decoction, or in some broth.

The Butter of Antimony, of which is made the Mercurius vitæ, *or the Emetick powder, or the powder of Algarot, and the Cinnaber of Antimony.*

TAke a good corrosive sublimate, and Male Antimony (or rather of the Regulus of Antimony) of each four ounces, powder them, then mingle them, and put them into a glass Retort, luted all over, except in one place towards the top,

top, and then you must leave a gap to look through: fill your Retort quite full, if you will; for there is no danger of the matters running out of the Retort in substance; and besides, a a gentle fire will presently distill as much of it, as is desired. Pose your Retort upon a Round, in a small wheel fire, and fit to it a Glass Receiver, there will presently rise a white vapour, which being dissolved, will distill in form of a whitish Oyl, call'd the Oyl of Antimony, and which in the Receiver, congeals to a kind of Butter.

Take great care your fire be not too strong, lest your Mercury revived, should come into the Receiver, and the Cinnaber of Antimony likewise; for that would render your powder yellow, which ought to be white: give then a moderate heat, till by the gap left in your Retort, you perceive all your Matter to be melted into a lump, clear and transparent, like melted Silver; and then you may be sure, that the Oily substance is distilled, therefore take off your Retort. This done, warm your Recipient, so melt the Butter within it, which pour out immediatly into a small Glass Retort, unluted, and set it in the same Furnace, with the same degree of heat, fitting a Receiver, and so rectifie this oyl once, for to rectifie it twice, would be to diminish so much of its vertue, that in stead of seven grains for a Dose, you would be forc't to give fourteen. But observe, That if in either of these distillations any reviv'd Mercury should be raised by too great a fire, and so come

into

into the Receiver: then separate gently, by inclination, the Oyl that swims on the top.

This rectification being done, you must warm again your Receiver, so as to melt the Butter; and when it is melted, pour it presently, into a Glass Bell, full of cold water; the water will become as white as Milk, stirr it a little, and your Butter will precipitate to the bottom, in form of a white powder: as soon as you perceive that, separate by inclination this first water, which we call Pontick, that is, Sea-water, and is Mineral; for, you must not let this first water, lye long upon your Precipitate, lest this water should contract an aciditie, as great as that of Spirit of Vitriol, and so corrode, dissolve, and diminish a good part of your Precipitate. The Water of this first Lotion, being poured off, pour on presently as much again, and stirr your Bell as you did before: then separate by inclination, and continue so doing, till your powder be edulcorated, and your water come away insipid: then filtrate the rest in white Paper, as has been said in the Chapter of the Diaphoretick Antimony. You shall have a very white powder, called the Emetick powder of Algarot; which keep in a glass, close stopped.

Towards the end of the first distillation, in your luted Retort; if you have a minde to have the Cinnaber of Antimony, give a violent fire of entire suppression, without any Receiver to your Retort; continue it, till your Retort be sunk and almost melted. This fire will drive the Mercury to the end, and middle of the neck

of

of your Retort, and when the Operation is done, it will be either revived into Quick-ſilver, or turned into a gray blackiſh powder; there will alſo be driven to the mouth of the Retort, and Antimonial ſubſtance, which at the end of the Operation, will appear in form of a cruſt, as thick as the back of a Knife, and which outwardly is of a grey colour; but being pared, is within red, and is called Cinnaber of Antimony. Now in the bottom of this luted Retort, you will find a congealed lump, which is the reſt of your Antimony revived: For, in this Operation, there riſes but a ſmall portion of your Antimony, to mingle with the corroſive Mercury, and there riſes a little more by the violence of the fire, to make this Cinnaber of Antimony; but the greateſt part remains in the Retort revived. Now to ſee theſe three ſubſtances together, after this violent fire, you muſt take off your Retort, let it cool, then ſhake the neck to make the Quick-ſilver fall out, whether revived, or in a gray Powder; then break your Retort, to find in the neck the Cinnaber of Antimony, and in the bottom a lump of the ſaid Antimony, melted and revived to its firſt nature. This done, weigh your Butter of Antimony, and your Mercury, as well that which is revived, as that which is in powder, and you ſhall ſee, that all this will weigh a little more than the Corroſive ſublimate, which you have made uſe of in this Operation. Weigh likewiſe the ſaid Cinnaber of Antimony, and the lump of Antimony revived, and you'l ſee, that all this

this weighs a little leſſe than the Antimony, which you have employed in this Operation; and that ſhewes, that the ſaid Emetick powder comes partly from the Mercury, and partly from the Antimony.

Obſ. 1. That we uſe here corroſive, not dulcified Mercury; becauſe, the dulcified having loſt its corroſive Salts, would not be able to open the Antimony, and turn it into Oyl; and beſides, there would not reſult out of it an Emetick, becauſe Mercury does provoke vomit, but by its corroſive Salts.

Obſ. 2. That we uſe here the beſt Antimony, nay the beſt *Regulus*, becauſe, being well purified and ſeparated from its Sulphur, and its moſt malignant ſalts, there is produced of it a more gentle Emetick; and therefore it is better and whiter with the *Regulus*, than with the Male Antimony; but then, you will have no Cinnaber by augmenting your fire, but only there will ſtick a Mercurial Chryſtalline Salt to the ſides of the Retort.

Obſ. 3. That the Emetick powder of Algarot, is nothing but a good quantity of Mercury, made volàtil by a leſs quantity of Antimony, by the means of the fire, and the volatil Salts that are in the corroſive ſublimate, then deveſted of the ſaid Salts, and ſweetned by Lotions.

The vertue and uſe of the powder, is known by its name, which ſpeakes it to be a vomitive, and that it performs much more gently, than the *Crocus metallorum*; becauſe, the Antimony

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we employ is purer, and in less quantity; and because, that the great washings have carried away the venemous Salts. Its Dose in persons grown up, is five Grains; you may give eight in some Conserve, or the yolk of an Egg, or in any Liquor appropriated.

The Use and Vertues of the Butter of Antimony: 'Tis a powerful Corrosive, it eats away Warts, and burns pockie Cancers in a moment: but, if it be applyed to any nervous part, it causes an inflammation for four and twenty hours: it is excellent for the exfoliation of Bones, and for the Gangrene.

The Use and Vertues of the Pontick water: It is excellent for Ulcers, Itch, Scabs, the Gangrene; you may use it in stead of Spirit of Vitriol, by mingling three or four drops in a Julip, in putrid and burning Feavers.

The Use and Vertues of the Cinnaber of Antimony: It is a great Sudorifick in the Pox. The Dosis is, from eight to fifteen Grains.

Bezoard Mineral.

TAke as much as you will of Butter of Antimony, melt it gently before the Fire, then pour it into a glass Bell, or Cucurbite, set it in a Chimney, lest the vapours which you must raise, should offend you. Pour upon it some Spirit of Niter, drop by drop, for else the ebullition would be such, and the red vapours so strong, that

that the matter would run out of the Vessels, and the vapours hurt your Brain. Continue this Injection, till the Mercury and Antimony, which are in form of Butter, be absolutely dissolved by the said Spirit; which you shall know, by pouring on some new Spirit of Niter: for, if there be no ebullition, nor smoaking, then the dissolution is performed; you must pour as much Spirit of Niter in weight, as you have used Butter of Antimony; your dissolution will appear all along of a yellow colour. As soon as it is done, pour upon it, all at once, a quart of Sea-water actually cold; this Precipitant will presently make all your Liquor of a milkie colour, and will precipitate your Butter to the bottom, into a very white powder, if you let it stand ten or twelve hours, to the end your Magisterie have more time to precipitate entirely: then separate by inclination your Sea-water, impregnated with the Spirit of Niter, which was the dissolvant, and pour on common Water, till it come away sweet and insipid; filter the rest through a white Paper, dry your powder, and keep it in a glass Vial well stopp'd.

Obs. 1. That, if in stead of Sea-water, you had made use of common Water for your Precipitation, you would have turn'd your Dissolution into a white Liquor, but you would never have precipitated your powder; because, that though common Water does much weaken the dissolvant, yet it does not do it so much as Sea-water, which, because of its Salt, contrary to the Salt of Niter, does fight with the said Niter, and in the conflict,

conflict, causes the sharpest, and most active part of the Niter to evaporate; and so to forsake its hold, as to let the Butter of Antimony fall, and precipitate to the bottom, in form of a white powder.

Obs. 2. That, that which we call Sea-water, is made thus, Take four ounces of common Salt, boyl it to dissolution in a quart of Water, in a brass Kettle, then filtrate it through the brown Paper.

Obs. 3. That in the great ebullition and effumation, caused by the Spirit of Niter, all the emetick and purgative vertue, which was in the said butter of Antimony, is evaporated, and at last carried away by reiterated Lotions.

Obs. 4. That Bezoard Mineral is nothing else but a Magistery, or Precipitate, compounded of a good quantity of Mercury, and a small quantity of Antimony, both being calcin'd, and opened by the Salts of the corrosive Mercury, then devested of the said Salts, by the Spirit of Niter, so that there remains in this Magistery, no other but a Cordial, Bezoardick, Sudorifick vertue.

Its Use and Vertue: 'Tis an excellent Sudorifick against the Pox, the Scurvie, all putrid and venemous Feavours. The Dose is, from eight to twelve Grains, in some Conserve; but observe, that if you mingle it with Conserve of Red Roses, it becomes immediately green, for the Reasons that we shall alledge hereafter.

The Calcination, or Calx of Lead.

TAke Lead, beat it into fine thin Plates, and take also of powder'd Brimstone as much, lay them *stratum super stratum*, in a glaz'd Pot, which set upon two Bricks in the Furnace of a great wheel Fire, and half Suppression; there leave it, till the Brimstone (which of its self, by the heat of the Pot, will take fire) be quite out, and have a care you do not let it stand longer, for fear of melting your Lead, and so reducing it to its first metallick consistence; therefore take off your Pot, and with an Iron *Spatula* stir your calcin'd matter, to hinder it from getting into a lump; then take it out, and powder it in a Mortar, then searce it in a silken Sieve, till it be reduced to an impalpable powder.

Obs. 1. That we use Brimstone to calcine Lead, because nothing but Brimstone will take Fire, all alone, and burn a good while; Niter would not take fire all alone with Lead, and indeed never is inflameable, but when he is joyn'd with some combustible Body, as Tartar, Antimony, Charcoal, or Brimstone; and if we did use here Niter, with some of these Bodies, its flame would be too swift to calcine Lead.

Obs. 2. That we use a verniss'd Pot for this Calcination, because our Calx is of the same Nature with the Lead of the Pot; and therefore is not in danger of being spoyled: and besides, the verniss will not be corroded by the Sulphur, be-

cause it is not a dissolvant powerful enough to corrode a glazing, so dryed, and fastened: for, if the Lead which you will calcine, were not beaten into very thin Plates, and Sulphur mingled with it, every where, it would hardly be calcin'd.

Obs. 3. That the Calx of Lead thus calcin'd, is nothing but Lead opened, and dissolved by the Spirit, and Salt of Sulphur; and the said Lead will remain in the nature of a Calx, but as long as there will be some of the Spirit, and Salt of Sulphur incorporated with it: therefore, if you continue your Fire any time after the Calcination, you will evaporate this Spirit and Salt, and so your Lead, devested of them both, will return to its first metallick Nature.

Its Use and Vertues: It serves to dry, and cicatrize old Ulcers, when they are cleansed before, and almost fill'd with flesh, by mingling it with some Unguent, as the *Diapompholixa*, with Hogs grease, reducing it to the consistence of a Plaister. Out of it also is drawn the Salt of *Saturn*, in stead of *Lytharge*, *Ceruse*, or *Minium*.

The

The ſweet Cryſtals of Saturn, *the ſweet Salt of* Saturn, *not cryſtallized.*

The Oyl of Saturn, *the Magiſtery, or Precipitate of* Saturn.

Put as much diſtill'd Vinegar, as you pleaſe, into a glazed earthen Pan, ſet it upon a Trefoot, making under a Fire of Coals, and dry Wood, till it begin to ſimper, and boyl ſlightly; then put into it by little and little, as much as you pleaſe of Lytharge of Gold, or of Silver powder'd, ſtirring it continually with a woodden *Spatula*: after it has boyled a little, take off your Pan, and let your Vinegar which is impregnated with the Lytharge, ſettle a while, then pour off the ſaid Vinegar, while it is warm: this done, pour more Vinegar upon the Lytharge, left in the Pan, boyl it, ſtir it, ſeparate it, and then put more, doing ſo till all the Lytharge be gone; then filtrate your Diſſolutions, while they are warm, through a Coffin of brown Paper, over a glaſs Cucurbite, which ſet in a Sand-fire, up to the neck in the Sand, and evaporate all your Filtrations, till they become as red as Bloud, and are covered with a little skin, or *Pellicule*: then pour them out into little white Diſhes, and there let them cool; when they are cold, you ſhall ſee that a

great part of this Liquor is congealed into Crystals, or white Crystalline Needles, as sweet as Sugar to the taste, and as thin as the Needles of Male Antimony: then gently pour out of these same Dishes a red Oyl, with a Sugar of *Saturn*, left in the bottom un-crystallized: then take out your Crystals, and keep them in a glass Viol well stopp'd with Cork, else they will fall into a Calx; and in another Vial keep the said Oyl of *Saturn*, which is nothing but the tincture of *Saturn*, drawn by the Vinegar. If by chance, in evaporating your Dissolutions, you were gone beyond the *Pellicule*, so as your matter begin to look thick and glutinous, then there would be no crystallizing of it; and therefore, evaporate it to a driness, to make the Salt of *Saturn*, not crystallized, or make the Magisterie of *Saturn*. Which is made thus: Take the said red glutinous Oyl of *Saturn*, or the Dissolution of *Saturn*, evaporated to the *Pellicule*, and pour on three or four ounces of either of them, three or four spoonfuls of Spirit of Sulphur, which presently will cause the Dissolution of Saturn to curdle into white Curds, which by little and little will precipitate to the bottom, into a white powder. This done, pour on common Water, to take away the acidity, both of the Vinegar and Spirit of Sulphur; but pour on Water but once, else all your powder would be spent in a second Water; because, this powder of *Saturn*, being half calcin'd, is made dissolvable in Water by that little Vinegar, which remains incorporated with it; separate by Inclination this first Water, and filtrate the rest through

through a Coffin of white Paper, or make Trochisks of it, through a glaſs Tunnel, as has been taught in the Chapter of the Diaphoretick Antimony.

Obſ. 1. That you muſt take a glaz'd earthen Pan, not a Stone, or Glaſs one; becauſe there is no fear the Vinegar ſhould corrode the Lead of the Verniſh: for, having been baked in an Oven, it ſticks ſo faſt to the earth, that the Vinegar cannot corrode it, neither if it did, were it amiſſe, ſince it is here us'd but for Saturn; a ſtone one, would be unfit, for it would fly, and break, and that happens to all veſſels of this Ware, except to Retorts; for, there the fire circulating equally on all ſides, hinders its breaking, which is not the like caſe in Pans: for, there the bottom only being heated, and the reſt cold, they eaſily break, becauſe of their great drineſs. For, they are made of one part of a ſtone powderd, which is as dry, and as brittle as Glaſs, and of one part of lean earth, which is not unctuous at all; a Braſs Baſin would not be proper; for the diſtill'd Vinegar would ſpend its force in extracting the ſalt of the Verdigreece, which mingled with that of Saturn, would make it look green.

Obſ. 2. That in this Operation we make uſe of Lytharge rather than of *Ceruſe*, or *Minium*; becauſe, the Lytharge, having paſſed the fire of Coppell, is a more ſpongeous open body; and therefore more penetrable by the diſtilled Venegar, and ſo will yeeld a greater quantity of Salt than Ceruſe, which has a cloſer body, be-

cause it has been opened only by distilled Vinegar, which extracts the Ceruse, from the Lead, and for the *Minium*, though it be Ceruse, made red in a Reverberatory fire; yet its body is not so open, as the body of Lytharge; because, it is so re-united, that it is almost re-condensed into its *Metallick* nature.

Obs. 3. That before we put the Lytharge into the Vinegar, we make the said Vinegar boyl a little; to the end, it may the easilier penetrate, and dissolve so much of the Saturn, as it can load it self withall, and we let the said Lytharge boyl but a little time: because, no more is required for the Vinegar to impregnate it self with Saturn; and if it should stand any longer on the fire, the evaporation would be begun, which ought not to be, till all your dissolutions are together.

Obs. 4. That we use here distilled Vinegar for a dissolvant; because, it is not necessary to have a more powerful corrosive to dissolve Lead, which is a soft penetrable Metal: yet, simple Vinegar would not be so fit, as the distilled; as well, because it is not so penetrating, , as because it is not seperated from is flegm: besides, if it were red, it might spoil the white colour of your Crystals, or Magisterie.

Obs. 5. That all your Lytharge is dissolved at last, by reiterated additions of Vinegar; because, that Lytharge is all Lead, and if there should remain any part of it un-dissolved, it would be, because you have not poured Vinegar enough on.

Obs. 6.

Obs. 6. That you must stirr with a Woodden spatule, this dissolution of Saturn, and not with an iron one; because, the iron would black it, whereas your design is to preserve the whiteness of the Salt, which you are to draw from it; and iron blacks, as well by its self, as by its Vitriol.

Obs. 7. That all your dissolutions being put together, you must evaporate them to the consumption of three parts, and till there appear a saltish skin, or *Pellicule* upon the surface of the Liquor; else they would not congeal into Crystals when cold. For, having too much flegm, that salt Spirit of the Vinegar, which hath dissolved Saturn, remains dissolved its self, in the flegm: but, when by a gentle ebullition, and evaporation of the said flegm, the Salt spirit remains alone, then it crystalises easily in a cold place, since it begins to do it already in a hot one, as you see it does by its *Pellicule*.

Obs. 8. That we poure this dissolution, thus evaporated, into white Ware dishes; because being warm, it would break a Stone, or Glass one, and in an earthen glazed one, the Crystals, because of the Glazing, would spoyl their whiteness.

Obs. 9. That these Crystals are in figure like to needles, and somewhat triangular. Some are small, and those are in the bottom; others are greater, and those are upon the brims, and have more of a triangular figure: they are white, because they are a Calx, or Philosophick calcina-

tion of Saturn, made by a diſſolvant, which cannot alter their colour; and they are in taſte a little acid, and very ſweet, or ſugarins, acid, becauſe of the Vinegar: ſweet, becauſe that Lead, being the ſweeteſt of all Metals, has likewiſe a very ſweet Salt, and thus the Salt of Lead is amongſt the Salts of Metals the ſame, that the Salt of the *Indian* Canes is amongſt the Salts of vegetables.

Obſ. 10. That when you pour two or three ſpoonfuls of Spirit of Sulphur upon your diſſolution, then this acid, being of a contrary nature to the acid of the Vinegar, fights with it, and weakens it ſo, as to make it loſe its hold, and ſo your Lead preſently curdles, and is precipitated into a white powder.

Obſ. 11. That the Spirit of Sulphur is fitter for this precipitation, than any other acid, becauſe it makes whiter, ſweeter, and more pleaſant, not only this, but all magiſteries. The Spirit of Vitriol blacks; the Oyl of Tartar has an unpleaſant taſte of Urin; the Spirit of Salt would be apt to fix with this Magiſtery, and the ſpirit of Niter is too ſharp.

Obſ. 12. That the Cryſtals of *Saturn* are nothing but Lead, diſſolved and calcin'd Philoſophically in diſtilled Vinegar, then coagulated into Cryſtals, by the evaporation of the flegm, and part of the ſharpeſt Spirits of the Vinegar, and ſo yet retaining a good part of the acid of the ſaid Vinegar. And as for the Magiſtery, it is likewiſe Lead diſſolved, and calcin'd by Vinegar, then evaporated, then precipitated into a white powder,

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by the Spirit of Sulphur, or ſome other acid, & at laſt, deveſted by lotions of the acid and ſharp part of the Vinegar, and the ſaid Spirit of Sulphur.

The Uſe and Vertue of the diſſolution of *Saturn*, before its evaporation into Cryſtals, or into the Magiſtery, is to cool, and appeaſe the pain, and hardneſs of inflammations; take away redneſs of the face, and *Ereſipilae's*; the affected part, being waſhed with lint dip'd in it. This mixtion is of a milkie colour; and therefore is called *Virgina's* milke. The Cryſtals and Magiſtery have the ſame vertue, to coole and appeaſe the pain, take away redneſs, ſoften hardneſs cauſed by inflammation, and attenuate and reſolve Tumours: for this purpoſe, you put five or ſix graines of them, and as much white Vitriol into a Glaſs of Roſe water, and Plantin mingled, and then in it we dip a thin ſlice of raw Veal, and lay it upon your Eys inflam'd, and full of pain, and redneſs. The ſame water may ſerve for the redneſs of the face, and *Eriſipelas*, dipping in it Linnen, and ſo applying it to the part affected: as for the Oyl of *Saturn*, it may be mingled with ſome of your cooling unguents, as the *Cerat* of *Gallen*, or the *unguentum roſatum*, or *Populeum*, to mollifie, ſoften, and take away the redneſs of all inflamed parts; and, if you have not this Oyl, you make uſe of the Salt of *Saturn* in its place, for the ſame end.

The Crocus Martis aperitivus.

TAke of filings of Steel, or Iron, two parts, and of powderd Brimstone one, mingle them together, and put them into an unglazed Earthen Pot, set it upon two bricks in a Furnace of Reverberation and Suppression, there let it stand, till all the flame of your Brimstone be spent, and after that, give the fire continually for an hour, then take off your pot, break it while it is hot, and presently put the Matter into an iron, or brass Morter, and powder it while it is warme, then spread this powder (which then will be of a colour of Violets) upon a Marble, the air will change the colour to brown, then powder it again, and searce it very fine, and keep it in a glass well stopt.

Obs. 1. That we use Brimstone, to open and calcine the body of Steel, or Iron; but, that we put half as much Brimstone, as iron; because, we intend here but a slight calcination: and the more you put, the stronger will be the calcination, and your *Mars* will be the more aperitive, or opening; they are powder'd together, that they may the better penetrate one another.

Obs. 2. That this calcination ought not to be done in an Earthen glaz'd pot, lest by the violence of the fire, the Lead of the Verniſh should melt, and mingle with your Steel, by the activity and flagration of your Brimstone.

Obs 3.

Obs. 3. That you must powder your calcin'd *Mars*, while it is hot: for, when it is cold, it growes hard, and so would not be so easily reduced to powder. For, even *Mars* not calcin'd, being actually hot, is soft, and malleable; and therefore, if calcin'd it is more; but both, when cold, doe fall to their natural hardness.

Obs. 4. That the filings of Steel, or Iron, from black that they were, do become purple by this half calcination, and pulverisation, being impregnated with this colour, by the Brimstone which naturally makes a blew flame; and at last this Purple colour being exposed to the air, becomes browniſh, because the fine Sulphureous part evaporating, leaves your *Mars* to its natural colour.

Obs. 5. That this *Crocus Martis Aperitivus*, or opening Saffron of *Mars*, is nothing but the filings of Steel or iron, half calcin'd, and opened by the Brimstone. This name of Saffron does not fit it well, except you mean a burnt Saffron; for this powder is not red as Saffron is.

Its Use and Vertues: It has the same Vertues as the aperitive Saffron of *Mars* following; and besides, it serves to make the second Saffron of *Mars*, and also to make the Crystalised Salt of *Mars*, and the astringent Saffron of *Mars*.

Another

Another Crocus Martis aperitivus.

TAke the Saffron of *Mars*, prepared above, put it into a stone Dish or Pan, and pour upon it Spirit of Vitriol, or of Sulphur, to the height of two fingers above your matter, letting it imbibe and impregnate it self for three or four days, then put your matter (which will be in form of Paste) into a great Crucible, and fill it up to the brim, to the end, the heat may work more upon it; set this Crucible upon two Bricks, in a reverberatory Furnace, giving at first, and all along for the space of eight hours, the greatest Fire you can; then take off your Crucible, break it with a Hammer, take out your matter, and while it is hot, powder it in a Brass or Iron Mortar; then let it cool in the Air, upon a Marble, and it will become as red as Saffron, searce it, and keep it close, and well stopp'd.

Obs. 1. That the Spirit of Sulphur, or Vitriol, with which we wet the said Saffron of *Mars*, which is already aperitive, serves to open it more, and calcine it Philosophically, and that the great Fire does it more perfectly.

Obs. 2. That this second aperitive Saffron of *Mars*, is nothing but *Mars* opened by four Keys, *viz.* By filing and powdering, and then by three calcinations, of which, the first is done by the flagration of the Brimstone; the second, by the pouring on of the acid Spirit; and the third, by a Reverberatory Fire of eight hours. Now it becomes

comes opening, because its Salt is set at liberty by these Agents.

Its Use and Vertues: It is a powerful despilative; it serves against the yellow Jaundice, the Green Sickness, it provokes the Courses of Maids and Women, and it opens the Spleen, and Mesentery, taken from half a dragm to two, either in the yolk of an Egg, or in a little Conserve of Roses, or some proper Syrup.

The Infernal Stone.

TAke a little Matrass with a straight long neck, let the belly of it be luted half way, put into it two parts of *Aqua fortis*, and one of Silver of the purest, cut or beaten into thin long Plates, so that they may go into the neck of the Matrass, and be the easilier dissolved by the *Aqua fortis*; fill but one third part of the belly of your Vessel, set it upon a Round, covered with Sand in the little Wheel-Fire Furnace, giving a small Fire to help the dissolution of the Silver, and to consume the Dissolvant, so as after a gentle boyling, your matter may dry, and change into a black scum, not unlike a Pumice Stone; then encrease your Fire, to melt this scum half petrified, and continue your Fire, till the boyling cease, and that there rise no more vapours; which will be a sign that your matter is in fusion: then, without any delay, pour out your matter into little Brass, or Iron Moulds, prepared on purpose: for, if you

delay

delay the pouring of it out, or if you let it cool in the Matrass, off from the Fire, your matter will be reduced to a white powder, which is the Calx of the Moon, that is, of Silver: and this will thus come to pass, by the almost total consumption of your *Aqua fortis*; and therefore, it is necessary to retain some of it in the said calcined Silver; to the end, it may keep the consistence of a Stone: if to this Calx of Silver, you give a violent Fire, and add to it half a spoonful of Borax, it will return to its first metallick Nature, and appear like Silver in hardness and consistence; because, that the great Fire, and the Borax together, carry away even the least drop of *Aqua fortis*, which did keep the said Silver in the nature and consistence of a Calx.

Obs. 1. That the Matrass which we use here, must be but little, because we do not ordinarily prepare much of this at a time; then your Fire being small, the matter cannot run out, particularly, where you leave two thirds of your Vessel empty. The Matrass must have a long straight neck, for the greater convenience in pouring out your matter into its Moulds. This Matrass must also be of a strong Glass, such as comes from *Lorrain*; and besides, must be luted in its bottom half way, lest a naked Fire, drying up the matter, should break the Glass.

Obs. 2. That we use here a double quantity of *Aqua fortis* to the Silver; not that it is necessary to double the Dose of the Agent, to dissolve the Patient; but, because we desire to make the greater quantity of this Infernal Stone, which will be

be softer and less black; for Silver may be certainly dissolved, with an equal Dose of *Aqua fortis*: and in this case, the Stone would be harder and blacker, and in less quantity: It contains not so much Salt, is sooner consumed, and the *Aqua fortis* has not had time to calcine the Silver throughly, from whence the Calx remains blacker, harder, and heavier; which you will easily perceive, if you take notice, that the same thing happens in the making of the ordinary Lime; for, there you shall see some stones, that have not been well calcin'd, look black, be hard, heavie, and crumble less, than the others that have been well calcin'd.

Obs. 3. That we may make this Infernal Stone of Niter, instead of *Aqua fortis*, and then it will be whitish, and less caustick, and instead of blacking the Skin, and Teeth, which it touches, it will only make them look yellow; because, it is the Vitriol that blacks in the *Aqua fortis*, and whets the corrosive vertue of Niter; and take notice here, that none of the other acids, and corrosives, can corrode Silver, nor by consequent, serve in this Composition.

Obs. 4. That to make a good Infernal Stone, either white, greyish, or black, you must use Coppel Silver; for, if you make it with Silver, where there is a mixtion of Copper, your Stone will be green, and soft, will easily melt of it self; from whence you may conclude, that there is no making of it with Lead, or Tin, which yet are softer than Brass; and as for Iron, it can never be dissolved, and brought into a potable Liquor, because

because of its great drineſs and terreſtreity. And as for Gold, you may eaſily make of it an Infernal Stone, of the ſame vertue, by diſſolving it in excellent *Aqua fortis*, or in Spirit of Salt, whet by Salt decrepitated; but then, you would have your Labour for your pains, for Coppel-Gold, or Leaf-Gold, is too dear. And as for the Marcaſſites, or half Metals, they are not fit for this Operation, becauſe that their diſſolution evaporated, and reduced to a Calx, cannot keep in conſiſtence of a Stone, but remains in powder.

Obſ. 5. That to give to the Infernal Stone, that firm compact conſiſtence, which is neceſſary for it, to be of uſe, it is not enough to dry your diſſolution, with a moderate heat, to the conſiſtence of a ſcum half petrified, but you muſt, when you are gone ſo far, encreaſe your fire, and melt the ſaid ſcum, then in the ſame inſtant, pour out your matter: for, if you let it cool in the Matraſs, the reſt of the *Aqua fortis* would evaporate in the cooling, and ſo there not remaining enough to corporifie the ſaid Calx, it would fall into a powder, which would be the Calx of the Moon.

Obſ. 6. That to make little Moulds of Lattin, you muſt hold it a little time over the Fire, then it will be maniable and flexible, and not apt to break; then cut off a piece, and roll it about a ſtick, as thick as a quill, and as long as your finger, and ſo tye it cloſe, remembring to turn up the bottom, ſo as nothing may go through: then daub it with our Lute, letting it dry; then when you will uſe it, take out the ſtick, and in its place pour your matter, which will be condenſed into

into petrified Cylinders; which you will easily get out, by taking away the Lute, and cutting the thread that tyes your Mould together.

Obs. 7. That the Infernal Stone, is nothing but a little Coppel-Silver, dissolv'd and calcin'd Philosophically by *Aqua fortis*, then coagulated by the evaporation of the greatest part of the said Water; and at last petrified by the fusion of the said coagulated matter, which has retain'd enough of the *Aqua fortis*, to be in the consistence of a Stone.

Its Use and Vertues: It is a gentle and pleasant Escarotick, it consumes by touching all Warts, proud Flesh, Cancers, Ulcers, and red Spots; if you wet with a little Water the said Warts and Spots. It appeases the pain of the Teeth, using it as has been said, upon that part of the Skin, and Cartilage, that makes the hollow of the Ear: the crumbs of this Stone powdered, and incorporated with a Suppurative, consume likewise ill Flesh, rotten in Ulcers. It serves likewise to dye the Beard black, if you put the weight of two or three grains of it into a spoonful of Water, distilled from the green shells of Walnuts; then with a pincel, or some such thing, pass it over your hair three or four times, observing to hold between it and your skin, a little Comb; for else this Water fails not to black the skin, where ever it touches; and that because of the Vitriol that is in the *Aqua fortis*: and if sometimes the hair grow green, it is because there has been dissolved in the *Aqua fortis* Silver, mingled with Copper, instead of pure Coppel-Silver.

Cauteries.

Put a pound of Quick-lime into a stone Pan, pour upon it by spoonfuls, about four ounces of common cold Water, not all at once, but by little and little, that so you may gently, and without smoak, slack it, and so retain a good part of its volatil and fusible Salts, which will contribute very much to the fusion of the matter of your Cauteries; and so make them fitter to be moulded into any shape. And besides, it will make them more caustick; for, all volatil Salts are more caustick than fix'd ones. Your Lime being well slack'd, and in the consistence of paste, pour at once upon it as much Water, as will reduce it to the consistence of thin Pap, and then put to it immediately two pound of good gravell'd Ashes, heat red-hot before-hand, for an hour, in a reverberatory Furnace, and in an un-glaz'd Pot: but, you must put them in by spoonfuls, as hot as possibly you can, as we have already taught, in the making of the Diaphoretick Antimony. This done, pour upon this matter, about four quarts of Water, which is as much as is requisite to dissolve all these Salts, and so let it stand twelve hours, to the end your Water may be well impregnated; and thus you will have a *Lixivium*: which you must separate by Inclination from its *Fæces*, into a copper Basin, which by reason of its Verdigreece, will whet your Cauteries more and more, and make them look blewish. Set this Basin on

on a gentle Fire, and evaporate your *Lixivium*, till it be dry, and have the consistence of a grey Salt. If then you desire to use them, as they are in a lump, and without shape, take off your Basin, and take out your Cauteries by pieces, and keep them in glass Vials well stopp'd: if you will have them well shap'd, then when your *Lixivium* is dried to the consistence of a grey Salt, encrease your Fire, and melt the said Salt, and when it is melted into a blew Liquor, then with an Iron *Spatula* red-hot (else the Salts would presently congeal, and stick to it) take up as much as you please, and let your lump fall by drops, upon a cold Marble, there they will be shap'd like half-Beads; when they are cold, take them off with a knife, and keep them in glass Vials, well stopp d with Cork, to keep the Air from them. Continue this, till you have shap'd all your matter, and that the remaining become black, and dry, upon which, if you pour some of your *Lixivium*, which you must have preserv'd on purpose, it will dissolve, and be fit to be moulded as the rest. At last, if there remain, as there will, some black dry matter, you may wash your Basin clean, and throw that away.

Obs. 1. That Lime contains two Salts; one fix, and the other volatil: the fix is dissolv'd in the Water which slacks the Lime; the volatil evaporates in the smoak, and boyling, with this distinction, That if you pour upon it at first all your Water, and so cause a huge ebullition, and smoaking, then all the volatil Salt flies away; but, if you slack it by little and little, pouring

only ſome ſpoonfuls at a time, then there being but a gentle ebullition, and little ſmoak, the volatil Salts are but weakened, and ſo do diſſolve in the Water. Now when you make Lime-water, to ſerve to the making of the Phagedenik Water; there it is not neceſſary to ſlack your Lime ſo gently, becauſe it ſuffices, if you retain the fix'd Salt, that ſo it may be able to dry and conſume putrid Ulcers; but when you make the Lime-water to ſerve to the making of Cauteries, then you muſt ſtrive to keep in the volatil Salt; becauſe, it is the volatil Salt, that makes the fix'd Salt, of both Lime and Aſhes, to be fuſible: and therefore, if you will ſhape your Cauteries, and make them more cauſtick, you muſt retain the volatil Salt.

Obſ. 2. That gravell'd Aſhes are a Calx, proceeding from the calcination of the Lees of Wine, and old pieces of Casks, which ordinarily are of Oak; ſo that this Calx contains the Salt of the Lees of Wine, and the Aſhes of the ſaid Casks of Oak: the beſt ſort, is that which is blue, and well dried; and you may eaſily perceive, that it is a Vegetable Salt, and indeed nothing but Tartar calcin'd, or a Salt of Tartar. Now this Salt is fuſible, as it has been ſaid: beſides, we heat it red-hot, and throw it into this Lime-pap, there to diſſolve. Heretofore we made uſe of Aſhes of common Wood, of Cabbage, and Bean-ſtalks; and we may uſe it ſtill, but this does as well, and is to be had eaſily at *Paris*.

Obſ. 3. That in this Operation, we uſe no Veſſels of glaz'd Earth, leſt the Salts of the Lime and

and Ashes should corrode the Lead, and so dull their point, and activity, to no purpose, which they are to preserve to cauterize therewith the places, they are applied to; nay, if you do but evaporate your Cauteries in a vernish'd Pan, they will lose much of their force.

Obs. 4. That these Cauteries are nothing, but a Salt composed of the fix, and volatil Salts of Quick-lime, and gravell'd Ashes; which having been dissolved in common Water, have by evaporation been coagulated in a moderate heat, then having been melted by a greater heat, have been coagulated by cold upon a Marble.

Its Use and Vertues: The name shews its caustick escarotick vertue; this kind of Cautery produces its effect in a small time, and yet gently enough, it is always dry, if it be kept well stopp'd in a glass Vial; but, if it be too dry, it cannot dissolve upon the skin: therefore, while you prepare all things for its application, put it to soak in a spoonful of Water.

The Magistery or Precipitate of Bismuth.

SEt a Cucurbite Glass, Bell, or Head, upon any thing within a Chimney, that so the infectious vapours may not poison the room, and offend by their stench the Artist, and Spectators: put into your Vessel four ounces of Bismuth, well powdered in a Brass Mortar, pour upon it one or two spoonfuls of Spirit of Niter, which presently will produce an ebullition, and a stinking in-

fectious smoak; when they are past, pour on again a like quantity of Spirit of Niter, which will cause the same effect; continue this till you have spent eight ounces of Spirit of Niter: if you pour on too much at a time, your ebullition will be so violent, that all your matter will run over your Vessel, and be lost, and the smoak will be so thick, that by its stinking red vapours, it will go near to do you some mischief. When you have thus spent all your Spirit of Niter; though after the last Projection, all your Bismuth be not dissolved, & devour'd by the said Spirit, nevertheless, separate by inclination, your dissolution, while it is warm, from that part of the Bismuth, which remains undissolv'd in the bottom of your Vessel, and you must pour this Dissolution into a precipitatory Vessel of Glass, or White-ware; and there it will be congealed into a thousand little transparent white Crystals.

In the mean time, pour by little and little, and at divers times, some new Spirit upon the Bismuth left in your Vessel, to the end, you may dissolve all the pure and good Bismuth that is left in this lump; for, there will remain at last a few black *Fæces*, which cannot be dissolved. Separate by inclination this second Dissolution in another Glass, or White-ware Vessel, and there let it crystallize as the former: then take all your Crystals, and mingle them together in a glass Bell, and there melt them with a gentle heat, and when they are melted, pour upon them a quart of Sea-water actually cold, which will precipitate them into a white Curd, which Curd

will by little and little dissolve into a white powder: then separate by inclination this first Water, pour on more, and so continue till your powder be entirely sweetened; nay, do it three or four times after that your Water comes away insipid; for, if there did remain the least Acrimony in this powder, it would wrinkle the Face, which it ought to whiten: filtrate this powder through a white Paper, and let it dry upon the said Paper in the shade, taking care to cover it, lest the dust should come at it; and do not dry it by the Fires side, or in the Sun-beams; for then it would return to its brown-blackish colour. When it is very dry, put it into a glass Vial, well stopp'd, and you have the true Magistery, or Precipitate of Bismuth.

Obs. 1. That Bismuth is a kind of Marcassite of Silver; and that therefore it is almost as good as Silver, to make by its calcination a good *Fucus*, or Cosmetick: for, it is certain, that the Precipitate of Silver, made in the same way as this, does much excel the Precipitate of Bismuth.

Obs. 2. That to make the Dissolution of Bismuth in Spirit of Niter, you must take a Vessel very broad towards the top, and therefore a glass Bell is the fittest, to the end, that the venemous vapours, that rise out of the matter, may the sooner and the easilier be gone; therefore in a Matrass, these vapours being streightned, would re-impregnate themselves, and make your matter yellow, in stead of white. Then your vessel must be Glass, or White-ware; for, in an earthen-glaz'd Vessel, your powder would grow black,

becauſe it would diſſolve the Lead of the Verniſh, and a Stone, or unglazed one, be leſs fit, becauſe the ſpirit of Niter might loſe, and inſinuate it ſelf in the pores of the ſaid Earth.

Obſ. 3. That though *Aqua fortis* can diſſolve Biſmuth, yet we uſe it not; becauſe, by its Vitriol the Calx of the Biſmuth would be ſo blacked, as to be uſeleſſe in the deſign of whitening the skin.

Obſ. 4. That your diſſolution being poured into a Glaſs, or white Ware veſſel, does there congeale into a thouſand little white Chryſtals, tranſparent and ſaltiſh, becauſe that the Spirit of Niter being loaden with the quantity of a Metallick body, Chriſtalliſes as Metals uſe to do, after their diſſolution. Theſe Cryſtals are white, becauſe that the Biſmuth is as white as Silver, and they melt by a gentle fire, becauſe they were congealed by cold.

Obſ. 5. That Sea water does precipitate diſſolved Biſmuth in a white curd, & white powder, becauſe that the Sea-ſalt which makes the Sea-water, being contrary to the Salt which makes the Spirit of Niter, attakes and fights with it, and ſo the Niter being weakned, becauſe, that in this conflict its ſharpeſt part evaporates away, lets go the Biſmuth, which it had ſeized upon, and immediatly the ſaid Biſmuth fals into a white curd and powder. 'Tis true, that the common water by moiſtening the Spirit of Niter, does much weaken it; but, if in this Water there had not been ſome Sea-ſalt, the Calx of Biſmuth would never have been well ſeparated

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from its dissolvant, neither would it have been precipitated to the bottom of the Vessel.

Obs. 6. That you must dry this Magistery in the shade by little and little, and not in haste, or by the fire side, or in the Sun-beams, lest it recover its brown dark colour; for the actual heat, either of the Fire, or the Sun, would revive in it a black burnd Sulphur, which sticks to the surface of this remedy: from whence, Ladies that use it may learn, that they must by a double reason keep it in the shade, as well to conserve their own natural beauty, as the artificial beauty which they borrow from this Magistery.

Obs. 7. That the Precipitate or Magistery of Bismuth, is nothing but a Calx of Bismuth calcin'd Philosophically by the Spirit of Niter, and then precipitated by the contrariety of the Sea-water, and sweetned by reiterated Lotions.

Its Use and Vertues: It is in Physick an excellent desiccative for Ulcers, as well as the Magistery of *Saturn*, and it is likewise a most excellent *Cosmetick* or *Fucus*, to make the face and hands white and fair, either by rubbing them with the powder alone, which insinuates its self into the pores of the skin, or else by applying a *Ponatum* made of one dragm of the said precipitate, and two dragms of *Unguentum Pomatum*, which you may prepare if you will, with one ounce of white Virgin Wax, and four ounces of Oyl of sweet Almonds, or Acorns, or of Beanes, or of the four cold seeds.

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The Spirit, Oyl, and Extract of Guaiacum.

TAke a great Stone Retort, lute it every where up to half its neck, lest it should break towards the end of the Operation: fill it up to the neck with *Guaiacum*, cut either into pieces, or shavings; place it upon the hollow part of the cover of an Earthen Pot, full of ashes, which must be set upon the two Iron Barrs that are in a small Reverberatory Furnace, lute and stop the gap of the Furnace which is above the neck of the Retort, till you have made it even with the top of the Furnace, then fit to the neck of your Retort, a great Glass Receiver, or an Earthen one, if you will, or a great Pitcher which be easilier made clean; because you may put your hand into it even to the Bottom; lute the said Recipient to the Retort, cover the Furnace wth its top, that is, an Earthen Pan turned the inside downwards, and with a hole in its middle, big enough to pass an Egg through, or else with two or three rounds of Bricks, as has been described in the great Reverberatory Furnace: then put some lighted Coales into your Furnace, and give your fire by degrees, adding to it after a little while three or four Fagot-sticks, yet have a care you do not over-heat your Vessel, lest your Receiver break by the violence of the vapours which also may lose themselves through the

the luted conjunction of both the Vessels: the true mark of a fit heat will be, if you can endure to lay your hand a pretty while upon the Receiver, this distillation is to last eighteen or twenty hours without interruption; the Spirit, comes first alone, and in a Glass Receiver appears in the form of white vapours: then the Oyl, with the rest of the Spirits, comes forth in the same form also, and does dissolve into a brown blackish liquor, which goes to the bottom of the Receiver: for all Spirits, and all Oyls, doe distill in form of white vapours, except Spirit of Niter, and *Aqua fortis* made with Niter, which therefore are called the flying Dragon, as well because of their redness, as of their malignity. The mark, that the distillation is ended will be, if your Receiver be cold, though there be an excessive heat in the Furnace; for, that is a sign that there comes nothing more into the Receiver. When all is cool, then unlute the Receiver, by wetting the lute with a wet cloath, and pour out your Oyle and Spirit of Guaiac together, into a glass Tunnel, and by one of these two waies, separate the Spirit from the Oyl. First, take a glass Tunnel, which hold with one hand, and with a finger of the same hand stop its lower orifice, then pour in your Liquor; the Oyl will presently go to the bottom, the Spirit will swim above, and upon the surface of the Spirit will swim some black drops of Volatil Oyl of Guaiac: Then set a glass Viol under the neck of yout Tunnel, and let go half your finger which stops the said orifice, and so

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the Oyl will pass into your Viol, and when you see that it is almost all passed, then stop the orifice again with your finger, and pour the flegm or spirit into another Violl. Do thus by all the spirit, and Oyl, you have in your Receiver, but by this way you will never separate the Oyl from the flegm so well, but there will be some in it still. Therefore use this second method which will doe it entirely and infallibly:

Take a Coffin of brown Paper, wet it with common water, or with Spirit of *Guaiacum*, if you have any, place it upon a Glass Tunnel, and pour into it the Oyl and the spirit together; the Spirit being watrish will pass, & filtrate through the said Coffin of Paper, and the Oyle will remain; which, afterwards you may easily conveigh into another Viol, by breaking the bottom of your Paper Coffin with a little stick, if you do not wet throughly the said Coffin of Paper before you pour into it the Oyl and Spirit, the Oyl will stick to the Paper, and hinder the filtration of the flegm: If your Oyl do not come kindly out of your Receiver, because it may be it is cold, and so condensed; present your Receiver to the fire to dissolve; your Oyl will be black and stinking, as the Oyl of Jet, and your spirit will be of a brown colour. Out of one pound of *Guaiacum*, you'l draw about one ounce and a half of Oyl, and ten ounces of Spirit: and there will remain about four ounces of Coales in your Retort: you may kindle this Coale, and burn it to ashes, and of these ashes make a *Lixivium*, and out of this *Lixivium* draw

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the Salt of *Guaiacum*, to the same uses and purposes, as the Oyl and Extract.

If you desire to have a Spirit of *Guaiacum*, purified from the greatest part of its flegm, and corrected of its stench, you must rectifie it in a stone Cucurbite, or glaz'd one, with a glass head in a Sand furnace, the insipid flegm will come first, that you may throw away; then the Spirit will come very acid, which keep, for those uses which we shall speak of anon.

To make the Extract of *Guaiacum*, put some Oyl of *Guaiacum*, to evaporate and thicken into the form of an Extract, into a cup over a Sand-fire, or else draw the tincture of the Oyl of *Guaiacum*, with Spirit of Wine, and so evaporate it to the consistence of an Extract.

Obs. 1. That for this Distillation, we use a stone Retort, because it is not necessary to use a glass one, which would be dearer; and the Spirit is not corrosive enough to corrode this Stone-Metal, as the Spirits of Niter, Salt, or Vitriol would do; besides, that the necks of your glass Retorts are so narrow, that the chips of *Guaiacum* can hardly be got into them.

Obs. 2. That if you use pieces of the heart of the Wood, which are hardest, and by consequent fuller of Oyl, you will obtain more Oyl, than from the shavings; and there is no danger in filling the belly of your Retort with them, because it is not a body apt to swell and run over.

Obs. 3. That *Guaiacum* yields a good deal of Oyl and Spirit, because it is full of Sulphur, and Mercury; the Wood yields better than the

Bark,

Bark, and the Wood in little pieces, yields more than in shavings, or great cuts; for, by their thickness, they retain more of Sulphur and Mercury. This Oyl and Spirit are very Salt, and therefore the Wood is heavie, for the Salts give the heavines to Mixtes. The Oyl is black and fœtid, because it has been distilled in a naked Fire, without any *intermedium*; and it is heavie, because of its Salt; as also sharp, for the same reason. The Heart of the Wood yields more Oyl, than that part which is near the Bark; which you may perceive by the eye, for the Heart is blackish, and the other is yellowish, like Box, which is the *European Guaiacum*.

Its Use and Vertues: The Spirit is somewhat drying and detersive; It is excellent for Burnings and old Ulcers, washing them with some Lint dipp'd in it; besides, if you put five or six drops of it in a bottle of a Sudorifick Decoction, it will work a greater effect, than if there were a great quantity of *Guaiacum* in the said Decoction; because, this Spirit has the force of the *Guaiacum*, and besides, much more activity, and penetration, by the tenuity of its spirituous substance.

The Oyl of *Guaiacum* is very drying, detersive, and cleansing; it therefore cures rarely well old putrid hard Ulcers, the Gangrene, and the Caries, or Rot of the Bones. Besides, you may give by the Mouth two or three drops of it in a spoonful of Cinnamon Water, for a windy, or bilious Collick.

The Extract of *Guaiacum* is very drying, and Sudorifick, and it is given in form of Pills, for Venereal Diseases.

The

The Spirit of Box.

The Oyl of Ash, &c.

THe Spirit and Oyl of the Wood of Box, of the Wood and Bark of Ash, as likewise of all other Woods, and Aramatick Barks, are drawn in the same way, as the Spirit and Oyl of *Guaiacum*:

The Wood of Box yields more Spirits a great deal, than the Wood of *Guaiacum*; but it yields so inconsiderable a proportion of Oyl, that out of four pound of Wood, you will have but one ounce of Oyl, though four pound of Spirit or Flegm; because this wood is fuller of Sulphur than *Guaiacum*, but is not so heavie, nor so Salt.

Its Spirit has almost the same vertues, as the Spirit of *Guaiacum*; the Oyl likewise has the same vertues, with the Oyl of *Guaiacum*, but is most particularly excellent for all Contusions, Ulcers, pain, and rottenness of the Teeth.

The Wood of Ash, yields about as much Spirit and Oyl, as Box; its Bark yields but little Spirit, and no Oyl at all.

Its Spirit is an excellent topical Remedy for deafness, and tingling of the Ears, because it does incide, and resolve the humours, and flatuosities which lie in the *Meatus auditorius*, and in the first concavity of the Ear.

Its Oyl is also most excellent for the Rot, or Caries

Caries of the Bones, and for the pain of the Teeth; it appeases the pain in the Kidneys, and Spleen, if the said parts be anointed with it.

The stinking, or fœtide Oyl of Cloves.

TAke Cloves, whose tincture has been already extracted by Spirit of Wine, (for it would be ill Husbandry to use others, & so lose their Aromatick tincture; particularly, since when, they have yielded their tincture, they are never the worse for this Operation) put what quantity you please of them, into a glass Retort, well luted, place it upon a Round hollow earthen Pan, in the Furnace of a great circulatory Fire, fitting to it a great glass Receiver; give at first a very strong violent Fire, and continue it till there appear no more vapours in the Receiver: these vapours are white, and do turn into a black, caustick, stinking Oyl. Out of one pound of Cloves, you may have about two ounces of Oyl, and eight ounces of Flegm.

Obs. 1. That we use here a glass Retort luted, because that stone Retorts are too big for the small quantity of Cloves, which is ordinarily us'd in this process.

Obs. 2. That you need not care, if you fill your Retort with Cloves, because they do not swell no more than Woods, or Barks; you may also fill it half full.

Obs. 3.

Obs. 3. That Cloves contain much Sulphur, and sharp Salt, from whence it comes that they yield much Oyl, and that very sharp and caustick.

Its Use and Vertues: This Oyl being very sharp, and biting, is most excellent for Ulcers in the Pox, and all other putrid, and venemous ones; as also it is good to exfoliate, or open the superficies of rotten Bones, and for the Gangrene.

Its Spirit is acid, and very good in Tettars, or Ring-worms.

The Oyl of Jet.

TAke some pieces of Jet, put them into a glass Retort well luted, filling it up to the neck; place it upon a Round hollow earthen Pan, in a circulatory Fire, and fit to it a great Receiver, which lute well to the neck of the Retort, give at first a small circulary Fire, then the great circulary Fire, and then a Fire of Suppression; there will appear in the Receiver, an abundance of white vapours, which will dissolve into Spirit, and Oyl. This Operation must last ten or twelve hours, with a continual Fire, and four pound of Jet in your Retort: out of one pound, you will have about two ounces of Oyl, and ten of Spirit. Separate by a glass Tunnel the Oyl, that goes to the bottom, from the Spirit, which will swim above, and keep them apart in two glass Vials;

upon the Spirit you will perceive swimming, divers thick drops of Volatil Oyl of Jet, which you may leave with the said Spirit.

Obs. 1. That we use here a Glass Retort luted for the same reason alledged in the Chapter of the Oyl of Cloves.

Obs. 2. That we fill the Retort without any *intermedium*, because Jet is a dry substance, which does not swell, no more than other Woods and Roots.

Obs. 3. That Jet is a Rocky Stone, which is drawn in great quantities out of some Quarrys near *Tholous* in *France*; and this Stone is very bituminous, having much Sulphur, a good deal of Salt, and very little flegm; from whence it proceeds, that it yields a good deal of Oyl, moderately sharp, and heavie.

Its Use and Vertue: The Oyl is most excellent for the suffocations of the Matrix; because of its extraordinary ill smell, being much more stinking then the Oyl of *Guaiac*, or *Karabe*, it serves also to dissolve all bruises, and contusions of the feet, proceeding from walking too much, the flegm has the same, but less vertue than the Oyl.

The Oyl of Myrrha and other Gumms.

TAke a Glaſs Retort well luted, fill it half full of Myrrha, broken into lumps, place it in the Furnace of a circulary fire. Fit to it a great Receiver of Glaſs, and give the fire by degrees, there will riſe an abundance of white vapours, which in the Receiver will diſſolve into a flegm, and an Oyl: this Operation will laſt five or ſix hours: Out of one pound of Myrrha, you will have ſeven or eight ounces of Oyl, and five or ſix of flegm, ſeparate by a Glaſs Tunnel the Oyl from the flegm.

Obſ. 1. That we uſe here a Glaſs Retort well luted, for the reaſons alledged in the diſtillation of the ſtinking Oyl of Cloves.

Obſ. 2. That we fill the Retort but half full, becauſe that the Myrrha does ſwell a little being heated, and ſo it the Retort were full, might run over in ſubſtance: yet becauſe it is a roſinous dry Gumm, it is not neceſſary to give it any *intermedium*.

Obſ. 3. That Marrha is a Gumme Roſin, having much Salt, Sulphur, and flegm, and therefore yeelds a good deal of Oyl, which is very bitter and heavie, as alſo a great deal of flegm.

Its Uſe and Virtues: This Oyl is very deterſive, becauſe of its great bitterneſs, and there-

fore serves to ripen and suppurat wounds, being mingled with the ordinary digestive: it hinders the Gangrene, being mingled with the Ægyptiac, or other like unguent: it stinks extremely, and therefore being smelt to, helps the suffocations of the Matrix.

The Oyls of Mastick, Olibanum, Storax, Benjamin, and all other Gumms, except Camphire, are made in the same way and method, and without *intermedium*, as the Oyl of Myrrha.

The Oyl of Bricks, or of the Philosophers.

Put five pound of powderd Brick into a Glass Retort well luted, then pour into it one pound of Oyl of Olives, either with a Tunnel or a Paper Coffin, in case the neck of your Retort be so straight, that you cannot pour into it otherwise without spilling. Do not fill above two parts of your Retort, lest the oyl in boyling should run out in its proper substance, and carry the Brick along with it, before it distill. Place your Retort upon a Round hollow Earthen Pan, in a circulary fire, and fit to it a Receiver. Give the Fire by little and little, and have a care you do not put your Coales near the Retort before the flegm be entirely distilled off, which you will know when you shall hear that your matter makes no more noise in the Retort: then encrease the fire, and lay,

lay your kindled Coales near the Retort, and at last give a fire of suppression, by covering your Retort, with kindled live Coales. There will come two Oyls, one red, and the other black and stinking, the distillation ought to be performed drop by drop, and if besides these drops there come fumes, that is a sign that the fire is too strong, therefore lessen it. This distillation will last four or five hours: out of one pound of Oyl of Olives, and five pound of Bricks, you will have about four ounces of Oyl, and half an ounce of flegm; separate by a glass Tunnel, the flegm that will go to the bottom, from the Oyl which swimms upon the top: if you rectifie this Oyl in a little glass Retort in a sand fire, it will become yellowish and less stinking.

Obs. 1. That we use a glass, and not a stone Retort, because the Oyl would penetrate the last, and cannot penetrate the first.

Obs. 2. That we give an *intermedium* to the Oyl of Olives, because it can never be distilled alone and would sooner break the Retort, than distill: and this *intermedium*, is rather powderd Brick then any thing else; because it being a spongious porous substance, it is sooner imbib'd, and than having little flegm, because it has been baked, it is fitter for this Operation, where much flegm would be prejudicial, and would go near to break the Retort by its combat with Oyl. Some quench pieces of Bricks red hot in Oyl, then powder and distill them, but they have a very small quantity of Oyl, and yet they must use a great Retort, and a great Reverberatory fire.

Obs. 3. That the Oyl of Bricks is nothing but Oyl of Olives distilled, having acquired by distillation a Tenuity and Thinness of substance, which makes it very penetrative, and warming, and also very stinking; the Brick communicates no vertue to it, and is only an *intermedium.*

Its Use and Vertues: This Oyl is very penetrating, inciding, and resolving, and therefore is most Soveraign for the paines and swellings that come from cold humours, as in the Sciatica, and also for contusions and blowes.

The Oyl of yellow Wax.

TAke five parts of Clay, or powderd Brick, put them into a glazed Earthen Pan, and pour upon them one part of yellow Wax melted: incorporate them well together, and make little Balls and Cylinders to put easily into a glass Retort well luted: fill it up to the neck, place it upon a Round hollow Earthen Pan, in a circulary fire, fit, and lute to it a Receiver, give the fire by degrees, as in the Oyl of Bricks, your matter being once hot, the flegm begins to boyl, and make a noise and comes out first in form of a white Vapour, then the Oyl also in the same form of white vapours, which are condensed into a very red stinking Oyl, which when cold, congeals into

butter

butter as yellow as Gold: This Operation will last four or five hours. For, a pound of Wax, out of which you will have fourteen ounces of Oyl or Butter, and half an ounce of flegm. If you rectifie this Oyl divers times in a little glass Retort by a sand fire, it will become as white, and as clear, as whites of Eggs, and will not stink so much.

Observe, That there are no other observations to be made upon this processe, than what has been already observed in the making of the Oyl of Bricks.

Its Use and Vertues are likewise the same; but besides, it is most excellent for the clefts of the Breasts in women.

The Oyl of Yolkes of Eggs.

PUt twenty or thirty Eggs into a Kettle of cold water, set your Kettle upon the fire, and boyl your Eggs till they be hard, then scale them, and take out the Yolkes; put all these Yolkes together into a frying-Pan, which set upon a Trevet, and make a good flaming fire under the Pan, then, crumble all your yolkes with an Iron Spoon, and so turn them now and then, continue thus doing, till almost all your yolks be reduced to a black oyl, and that there remaines but a few burnd black *Fæces*; pour this Oyl, into a litttle Earthen Pot, keeping with your spoon the *Fæces* from going in with it; this

Oyl does not congeal, because it has been drawn with a great Fire, and you may use it without any other preparation; but, if you desire to have it clearer, & more penetrating, then rectifie it in a little glass Retort in a sand fire: it will become as yellow, as Gold, and will congeal like Butter. If you rectifie it in a naked fire, it will not be so yellow, but it will congeal a little, for by both of these rectifications by a gentle heat, the stinking Sulphur remains in the Retort, and it was this Sulphur that made it stink, and kept it from congealing, which is proved by this following experience, which is another way of clarifying the said Oyl, *viz.* Put the said Oyl into a double Matrass, for a month, over a gentle fire, or in a Lamp Furnace, or ashes, or in Horse-dung, the Oyl will clarifie its self most perfectly, because its *Fæces* will go to the bottom; and then you may easily separate the clarified Oyl from its *Fæces*.

Obs. 1. That if you put your Eggs into the water when it boyles, that they will scarce be hard enough, and therefore will not be fit to yield their Oyl, because they retain while they are not hard, somthing of a superfluous humidity, and in the Pan they would crackle and sparkle, and hardly afford any Oyl.

Obs. 2. That this Oyl, though when it comes from the Pan, be blackish, has not nevertheless any ill taste nor small, but when it is rectified, it becomes sharp and stinking.

Its Use and Vertues: It is a most excellent *Balsamum* drawn from volatils; it is anodyne, astringent

gent, agglutinative, and mundificative; and therefore most excellent for all burnings and fresh wounds, as also for the cleavings of womens breasts, and likewise for the descent of the bowels, by anointing the part, and then applying a bandage, or truss.

There is another way of making this Oyl, *viz.* to heat your yolkes in the Pan till they begin to grow red and to burne; then put them into a course linnen cloth, Oyl'd with Oyl of Almonds, and so put this cloth under a press, and press out the Oyl, but this Oyl has not the force of the other drawn by the method we have already set down.

The Oyl of Karabe, and the Ambred Spirit of Wine.

REduce into a gross powder some yellow Amber, (you may make use of the pieces which the workmen that work in Amber pare off, and you shall have it cheaper, than at the Droguists) put four ounces of it into a glass Retort well luted, & pour upon it eight ounces of Spirit of Wine, so as your Retort be not above half full, set your Retort on a Round hollow Earthen Pan, in the little circulary Furnace, and fit to it a good ample glass Receiver, which you must not lute to the Retort, lest the vapours of the Spirit of Wine, which

which cannot be contained in the Receiver, should break it: but be careful in luting the gap of the furnace, about the neck of the Retort, lest the flame should reach the Receiver, and there set on fire the vapours of the Spirit of Wine, and from thence the flame would get into the Retort. If such a thing should happen, the remedy would be, to stop presently the mouth of the Retort with some Lute, to choak the flame. Encrease your Fire by degrees, and when you perceive that the Receiver is not very warm, then encrease your Fire more, and give a Fire of Suppression, to the end, you may drive out the Oyl of Amber, together with the Spirit of Wine: continue your Fire, till you perceive no more clouds in your Receiver, for that is a sign that all the Oyl is extracted, and distilled from the Amber: you will find two ounces of black Oyl of *Karabe*, or Amber, and eight ounces of Spirit of Wine impregnated, with the red Tincture of the said *Karabe*, separate by a glass Tunnel, the Oyl from the Spirit.

Obs. 1. That we distil Amber with Spirit of Wine, to the end, we may have the vertue of the Amber in a higher degree for penetration, and less stinking. It may be distilled all alone, and without *intermedium*; because, that though it be a bituminous Body, nevertheless, it is so dry, that it does not swell in the Retort: but, when it is distill'd alone, its Oyl is as black as Jet, and much of a worse smell, and cannot become yellow, but by reiterated rectifications.

Obs. 2. That if upon the said Oyl of Amber, you

you put Spirit of Wine, it will preſently be tinged with it, and will have the ſame vertue as the Spirit of Wine, that has been diſtilled with Amber.

Obſ. 3. That Amber is a bitumen ſo oylous, that it is almoſt all Oyl, and contains but very few *Fæces*: ſince out of one pound of Amber, you may draw fourteen ounces of a black Oyl; inſomuch, that it is nothing but a bituminous Oyl, congealed by a little terreſtrial ſubſtance.

Its Uſe and Vertues: The Oyl of Amber is very bitter, and ſtinking, and therefore excellent in the ſuffocations of the Matrix; either taken inwardly, in the quantity of three or four drops in ſome appropriated Water, or elſe ſmelt to, or anointed upon the Temples; it is moſt excellent in old Wounds, and particularly of the nervous parts, becauſe of its deterſive balſamick vertue.

The Spirit of Wine ambred, or tinged by yellow Amber, is likewiſe a moſt excellent Remedy, taken in the ſame way, for the ſuffocations of the Mother, and for the Falling Sickneſs. It is beſides, a moſt excellent exteriour Remedy for the Palſie, the Sciatica, the Cold Gout, all cold Fluxions, and all bruiſes of the Nerves. And this, becauſe of the great tenuity, and penetration of its ſubſtance, and its reſolutive, and balſamick vertue: but, when you do rub any affected part with this Remedy before the Fire, have a care you come not too near, leſt the Fire ſhould catch hold of it, and burn the party.

The Oyl of Camphire.

Put two ounces of Camphire slightly powdered, into a Matrass of an ordinary size, and pour upon it four ounces of Spirit of Niter, shake your vessel gently for half a quarter of an hour, to the end, that this agitation may whet the Spirit, and make it operate the sooner upon the said Camphire; then let them stand together, far from the Fire, within two hours the Spirit will dissolve the Camphire, without any sensible ebullition or smoak, and there will swim upon the Spirit, a clear transparent Oyl. Separate by the glass Tunnel, the said Spirit, which will be at the bottom, and will have lost a good part of its caustick Acrimony; keep your Oyl in a glass Vial well stopp'd.

Obs. 1. That this Oyl of Camphire, is nothing but Camphire dissolv'd by Spirit of Niter; for, if you throw a little Water upon this Oyl, the Camphire will presently be coagulated into its first white consistence, and smell, because that the Water by weakning the Spirit of Niter, which kept the Camphire in dissolution, makes it lose its hold, and so the Camphire precipitates to the bottom.

Obs. 2. That of all the Gums and Rosins, none but Camphire does melt into Oyl in its dissolution, by Spirit of Niter, which may extract the tincture of the other Gums, but cannot dissolve them.

Its Use and Vertues, are to exfoliate the Rot of the Bones, by the strong penetration, and driness of both the Spirit of Niter, and the Camphire; therefore is it most excellent wherewith to touch the Nerves, that are bare, and naked in wounds; for it consumes gently, the sharp humour which falls upon them, and makes the said wounds most grievous, and by its anodyne, and mollifying vertue of the Camphire, it takes away a great deal of the pain of the said Nerves.

The Spirit of Wine Camphorised.

Put as much Camphire as you please into a Matrass, pour upon it good Spirit of Wine, till it be four fingers above your matter; fit to this Matrass another little one, and so make a double vessel; lute them well together, with slices of Paper, place your Vessel in a Sand-Furnace, and there let it stand, till the Camphire be entirely dissolv'd in the Spirit of Wine: the Spirit will then be clear, and transparent as before, and the Camphire will have a pleasant smell. There is nothing to be said about the dissolution of Camphire, by Spirit of Wine, since Camphire is a kind of Gum-Rosin, and that Spirit of Wine has the vertue of dissolving all Gums by the homogeneity of its substance, and the tenuity of its parts.

Its use and Vertues: It is a most excellent *anodyne* to appease the Tooth-ach, by putting a little Cotton

Cotton dipp'd in the said Spirit of Wine, to the pain'd Tooth, and it is good to help the pains in the Ears, by dipping in it some black Wooll, cut off of the Stones of a black Ram, and so put into the Ear.

The Aromatick Tincture of Cloves.

Put of whole Cloves, what quantity you please, into a Matrass, and pour on well rectified Spirit of Wine, to the height of four fingers above your matter; make a double Vessel, with another small Matrass, fitted to the first, and well luted together; place this vessel in a Sand-heat, and there let it stand, till the Spirit of Wine be dyed of a red-blackish colour; separate by inclination this tincture, and keep it in a glass Vial well stopp'd. Of this tincture, may be made a Syrup, by putting to it a sufficient quantity of Sugar, and so boyling of it to the consistence of a Syrup: or you may make of the said tincture an Extract, by evaporating your tincture to the consistence of an Extract.

The Use and Vertues of the Tincture, Syrup, and Extract, Are, to comfort and strengthen the Stomack, by consuming cold, superfluous humours, take away the pains of the Collick; it is excellent against all Faintings of the Heart, and kills Worms in the body. The Dosis is a spoonful of the Tincture, or Syrup, and a Pill of the Extract, or else you apply Linnen dipt in the said

said Tincture, upon the Stomack, Belly, and Navel.

Cinnamon Water.

Put four ounces of whole Cinnamon, not powdered, and two pound of White-wine, or Sack, into a Glass, or Stone Cucurbite, place it in a Sand-Furnace, with a glass Head, and Receiver, there will be distilled a Water very clear, and full of Spirits, which from time to time you must take, and pour out of your Receiver, to the end, it be not mingled with the gross flegm, which will come at last of a whitish muddy colour.

Obs. 1. That you must not distill Cinnamon-water in a Cucurbite of glaz'd Earth, lest the Cinnamon should whet the Spirit of Wine, and make it corrode the Lead of the Vernish, and so being impregnated with the *Saturn*, alter its own vertue.

Obs. 2. That the Water of Cinnamon, is nothing but the purest part of the Wine, impregnated with the volatil Aromatick Salt of Cinnamon.

Its Use and Vertues: It is a good Cordial, fortifies the Stomack, facilitates, and helps the Delivery of Women in Child-bed; the flegm of this Water is fitter to make the Syrup of Cinnamon, than common Water, by infusing in it some new Cinnamon, and after the straining, dissolve in it a suf-

a sufficient quantity of Sugar, and so boyl it up to a Syrup. This flegm contains a little Spirit of Wine in it, with a little of the volatil Salt of the first Cinnamon; and so is fitter to open, penetrate, and extract the substance of new Cinnamon, than simple common Water.

The Spiritus Ardens, *or burning Spirit of Honey.*
The sweet Tincture of Honey.
The stinking, or fœtid Oyl and Spirit of Honey.
The stinking Tincture of Honey.

Put into a Glass, or Stone, or glaz'd Earth Cucurbit, one pound of good Honey, and two pound of White-wine; place your Cucurbite in a Sand-Furnace, and set it half way into the Sand, fitting to it a glass Head and Receiver, give a good Fire, and continue it till all be distilled, and that you hear nothing boyl in the Body; then there will remain a very black, thick Honey: keep the distilled Liquor, which will be of two sorts, the first will be clear and transparent, and in a small quantity, and in this is the burning Spirit of Honey, and the Spirit of Wine. The second will be of an Orange colour, and more in quantity, and contains the flegm of the Wine, with the sulphureous Tincture of the Honey.

Take

Take the *Fæces* of the said Distillation, put them into a Stone Retort well luted, and put to them like quantity of River-pibble-stones calcin'd; place your Retort in a Reverberatory Furnace, fit to it a great glass Receiver, and give your Fire from the first to the last degree, for the space of some hours, till there come out of the Retort, neither vapour nor liquor; then you will have in your Receiver, a Spirit, and stinking Oyl of Honey; and there will yet remain some *Fæces* in your Retort.

If upon these *Fæces* you pour Spirit of Wine, till it be four or five fingers above your matter, you may have by digestion in a Matrass, or double vessel in a Sand-Furnace, a fœtid Tincture of Honey, as red as Claret Wine.

The Use and Vertues of all these Tinctures, Spirits, and Oyls, Are to make the Hair grow stiffer and thicker upon Bald-heads.

The Vinegar of Saturn.

The Butter, or Balsamum *of* Saturn.

BOyl some distilled Vinegar in a Brass, or Tin Skillet, or in a glaz'd Pipkin; pour it out boyling hot upon *Minium*, or *Ceruse*, or *Lytharge* of Gold or Silver, reduc'd to powder, or upon calcin'd Lead; let your matter be in a glaz'd Pan, and you must have so much Vinegar, as may be four or five fingers deep over your matter. Stir

it a little with a woodden *Spatula* (not with an Iron one, for it would black both your Liquor, and the Salt to be extracted out of it) in an hours time your distilled Vinegar will become sweet and sugar'd, and impregnated with the Salt of *Saturn.*

To make the Butter, or *Balsamum* of *Saturn*; melt one ounce of white Wax, in a little glaz'd Pan, then put to it four ounces of Oyl of Olives, mingle them well with a woodden *Spatula*, pour this mixtion immediately into a Brass Mortar, and upon it, a glass full of the Vinegar of *Saturn*, stir them well together with a Brass Pestle, till the Oyl and Wax be both impregnated with the Salt of *Saturn*, contain'd in the said Vinegar, and that all the Composition be thick and white, as the soft Ointment of white Roses.

Its Use and Vertues: This Vinegar serves to appease inflammations and pains, being applied outwardly to any part, by Linnen dipp'd in Virginas Milk, made of one spoonful of this Vinegar, and a glass of Water; it may also be useful in Injections, in recent and fresh Gonorrhæa's, to appease the violence of the pain. And observe, That this Vinegar, pour'd upon any distill'd Water does not whiten it, nor make it like Milk.

The Butter, or *Balsamum* of *Saturn*, serves to cool and appease the ardour of inflammations as well of the Stones, as of the Hemorrhoids and other parts: as also, it produces the same effect in *Erisypelases.*

The Plaiſter of Saturn.

Put one pound of Oyl of Olives into a verniſh'd Pan; add to it four ounces of well powder'd *Minium*, or Mine-Lead, and ſo boyl them together; ſtirring them ſometimes with an Iron *Spatula*, till they be reduced to the conſiſtence of a Plaiſter, as black as Jet; you may add to it a little Wax to give it a Body.

Its Uſe and Vertues: It is moſt excellent in diſſolving thoſe fleſhly Excreſcences, and Ulcers called *Wolfes*.

The Extract of Hellebore.

Put half a pound of the Roots of black Hellebore, cut into little bits, into a capacious Matraſs, pour on Spirit of Wine, four fingers above your matter; fit to it another little Matraſs, to make a double Veſſel; place it in a Sand-Furnace, and there let it ſtand in digeſtion three or four days; and let not the belly of your Matraſs be above a quarter-way in the Sand, nor do not make your fire ſo great, as to make your Spirit of Wine boyl; for, then part of your Spirits would exhale, and be gone; yet, let there be heat enough to extract the red Tincture of the Roots. Separate this Tincture by Inclination, or if there be any *Fæces*, filtrate it through a

Coffin of brown Paper; pour this Tincture into a glass Body, which set in the same Sand-Furnace, and fit to it a glass Head and Receiver, and so draw off by Distillation, as much Spirit of Wine, as you poured on, which will serve you for other uses; then take off the Head, and evaporate your matter to the consistence of an Extract like Honey.

In the mean time, boyl the Roots left in the Matrass in a quantity of common Water, to make a Decoction, which strain through a course Linnen, then clarifie it with Whites, and Shells of Eggs, and evaporate it in a stone, or glaz'd earthen Pan, to the consistence of an Extract, which you may mingle with the precedent, if you think good.

We draw these two Extracts separately, and with different menstruums, because, that the Spirit of Wine extracts only the gummy rosinous part, and cannot extract the saltish: and the common Water does quite contrary.

Its Use and Vertues: It purges Melancholly most commonly with a loathing, and sometimes with vomiting.

An Essence for the Tooth-ach.

Put of the Spirit of Wine camphirized, of the Tincture of Cloves, of the Oyl of Box, of the Oyl of *Guaiacum*, of the black Oyl of Sulphur, and if you will, of the Tincture of *Opium*,

Opium, of each an equal part, there will result an oily red transparent Liquor, which you must keep in a glass Vial well stopp'd.

Its Use and Vertues: It is a most excellent Remedy to appease the Tooth-ach, and draw off the sharp humour that falls on the Teeth; you must pour some of it into a glass, and then dip a little Cotton, of which make a Pellet, as big as a Pea, and apply it to the Tooth, or in its hollow part, if there be any; there will presently distil from it a good deal of Water, and the pain will cease.

Turpentine Pills.

Put four ounces of clear transparent Turpentine of *Venice*, into a glaz'd Dish; pour upon it three times as much Water, boyl them together with a gentle heat, till your Turpentine look white, and not yellow, as before; then take out a little of it upon the point of a Knife, and let fall a drop or two, upon a pewter Plate; if you see that the drop, when cold, does not stick to your fingers, then it is boyld enough to make Pills of; so take it off, and pour cold Water into your Pan, that will precipitate the Turpentine in a white Paste: take this Paste, and knead it with your hand to wring the Water out, you may wipe your Turpentine, with some Linnen, but you must do it gently, lest while it is warm, the Linnen should stick to it; then add to it one ounce of Diaphoretick Antimony, half an ounce

of Salt of Sulphur, and as much of *Cremor Tartari*, incorporate them together into a lump, which will soon grow hard, but will easily grow soft again, being handled before the fire. Keep this Mass for Pills, in a Hogs bladder, well oyl'd with Sallet Oyl.

Its Use and Vertues: These Pills do dry up, and stop Gonorrhæa's when they have flow'd enough, by giving half an ounce for Dosis, for the space of a fortnight or three weeks. For those that cannot swallow Pills, you must boyl your Turpentine a little more, till it grow so hard upon the Plate, as to be broken in pieces, powder this in a mortar, and add to it the same Druggs, as above. The Dosis mentioned will be the same here, and must be dissolv'd in white Wine, or in Broth, or in some Decoction, or appropriated Water.

The distilled Water of Plants.

Put a good Hand-basket full of leaves, (for Example of Plantane) new gather'd, and fresh, into the Brass Vesica, add to them about four quarts of Water, to the end, the Herb may boyl during the distillation, and that in boyling, the said Water may extract, and be impregnated with the vertue of the plant; yet, let not your Vesica be above three quarters full, lest the Water in boyling, should carry the substance, and not the vapours into the *Moors-head.* You need not put any spoonges in the neck of the Vesica,

sica, as you do in the distillation of the Spirit of Wine, because these spoonges would hinder the passage of your vapours; fit to your Vesica its *Moors-head*, bordered with its Refrigeratory; and make use also of the second Refrigeratory, that is, of the two Hogsheads full of Water, as has been taught in the distillation of Spirit of Wine; this will further the distillation of your Water very much. Give at first a good Fire of Coals, and two or three Fagot-sticks, continue this Fire, and moderate your Distillation so, as to make a little stream of Water come always into your Receiver, into which it will not fall perpendicularly, as the Spirit of Wine does, but a little arch-wise. As soon as with this little stream you perceive that there come vapours into the Receiver, lessen your Fire, to hinder the loss of these vapours, which spend themselves in vain. If your Distillation be performed but slowly, and drop by drop, or in a very little stream, falling perpendicularly, then encrease the Fire, that you may not lose your time by an unnecessary protraction of the Distillation. From time to time empty your Receiver, and immediately pour it through a glass Tunnel into a stone Pitcher.

As soon as you perceive, that there comes into your Receiver a muddy Water, then be sure, that all the good part of your Operation is at an end; because, this muddy Water proceeds from the burning of the Plants, which begins to send forth its Spirit, and stinking Oyl; therefore give over distilling, put out your Fire, take out the Grounds of the Herbs left in the bottom, and

throw away the muddy Water that you shall find there with them; after which, begin a new Distillation with new Herbs, and new Water.

When you have gathered all your Water into stone Pitchers, put into them some Saltpeter, well purified, and crystallized, half a dragm to every pound of Water.

Obs. 1. That you must not put your Water into an earthen Vessel unglazed, because, at last it would lose its self entirely, through the pores of the Potters-Earth, which is very porous and spongious; therefore, always put it in Glass, White-ware, or glaz'd Vessels, or Stone, because that these are very dry and thick, and there is no danger in glaz'd Pots, because your Water has no Acrimonie wherewith to corrode the glazing: all the danger is, that the Frost should break them; for preventing of which inconvenience, you must keep your Vessels in a warm deep Cellar, or in a Box full of Hay.

Obs. 2. That the refin'd crystalliz'd Niter which you put in your Water, serves to preserve it for many years; and that Niter is fitter for this purpose, than the fix'd Salt of the Plant, which would be very tedious to extract, by drying and burning of the *Fæces*, then infusing the Ashes, then filtrating this *Lixivium*, then evaporating it to the consistence of a Salt.

Obs. 3. That you must presently stop your stone Pitchers with a Cork stopple; and it is not necessary to expose them to the Sun-beams.

Obs. 4. That to make Rose-water, it is better to put pale Roses well picked, into a great earthen

earthen glazed Pan, and add to them water and common Salt: for example, upon six pounds of Roses, as many quarts of water, and one pound of common Salt, and so let them macerate and ferment two or three dayes, then put them into the Vesica, and distill them: observe, that during the distillation, and after it is done, the Rose water does smell but very little of the Roses: but if you will quicken the smell, it is but setting your Pitchers some days in the sun, covered only with a white Paper: then take them, and stop them close with a cork stopple, and set them up.

Its Use and Vertue: Is the same with the vertue of the Plant it is distilled from.

The soft Conserve of Leaves and Flowers.

TAke a deep large Pan, set it in such a Furnace as the great Reverberatory Furnace, throw a handfull or two of sand into your pan; then place in it a stone Pitcher of a quart, five quarters full of water; fill up your pan with sand, so as to bury the belly of the pitcher in sand. Then put into the mouth of the Pitcher, a Glass, or Tin Pipe, as big as your little finger, and a foot long; being bended in its middle angular-wise; one end of it must be so streight, that a drop of water may not go through

through in substance, the other end must be pretty wide: put the wide end lapt about with a letle Linnen into your pitcher, and then make a fire in your Furnace, and cause your water to boyl; as soon as it boyls, there will come out with violence at the lttle end of the Pipe a moist burning vapour: which will stream above half a foot beyond the Pitcher, and yet not a drop of water with it: set under this vapour a pan full of Leaves or Flowers newly gathered and fresh; having before hand sprinkled upon them two or three spoonfulls of Spirit, or Flegm, or Vitriol, or Sulphur; these Leaves or Flowers will fade by little and little, as they receive this penetrating vapour. In the mean time, you must turn them continually, till they become like a thick hasty pudding, which will be in halfe a quarter of an hour; then take out these Flowers thus prepared, put in more, continuing so, till you have prepared all your Leaves and Flowers, then put them all together into an Earthen Pan, and add to them double their weight of fine Sugar, well powdered and searced; incorporate them well together with your *Spatula*; and thus you will have a very pleasant good conserve, which will keep as long as that which is made by beating the herbs in a Mortar, keep it in white ware pots.

Obs. 1. That we have filled our Pitcher but three quarters full, to the end, that the water in boyling, should not come out through the little end of the Pipe in its own substance, but in Vapour.

Obs. 2.

Obs. 2. That the Spirit of Vitriol, or Sulphur, with which we sprinkle the said Leaves, or Flowers, serves for two ends: First, it revives and quickens their natural colour, preserves it, nay, and re-cals it, if it were a decaying; Secondly, it is as a Salt to these Leaves, or Flowers, to preserve them from corruption.

Obs. 3. That in all seasons, even in winter, you may by this method make a soft, or Liquid Conserve of Roses, with dry Roses, whose dying yellowish colour, you may this way revive, and make them of a lovely red. But the Operation will be somewhat tedious, for it will last an hour, but also the Conserve will last and keep longer, than if it had been made of fresh Roses.

Obs. 4. That if you take a straight Pipe, half a foot long, and put the wide end of it, into the nose of the cover of the Brass Vesica, which must be half full of water; then the Sulphur that shall come out of the streight end of the said Pipe, will do the same effect, as the Engine described already.

Obs. 5. That if you sprinkle the Conserve of Flowers of wilde Popies, with Oyl of Tartar, made *per deliquium*, or by dissolution of its Salt; and then stirr the said conserve, it will become of the colours of Violets, like Syrup of Violets, and if you sprinkle the conserve of Roses, with the said Oyl of Tartar, and then stirr it; it will become as green as growing grass.

The Lime Water and Phagedenick Water.

TAke four or five pound of quick-Lime in stones, and not in powder, and choose such stones as are very well calcin'd; put them into a barrel knocked out at one end, or into a great stone Pot; throw upon it at once two pale fulls of water, and then stirr it with a stick; reiterating the agitation from time to time: there will be a very great ebullition & smoak, in which the Volatil Salt of the Quick-lime will evaporate, in two hours or thereabouts the boyling will cease, and the Quick-lime will fal to the bottom: upon the surface of the Water there will remain a thin transpareut white Ice, which is the essentiall Crystallized Salt of the Quick-lime; let this water stand for some days, stirring it from time to time that it may be well impregnated with the Salt of the Lime; or else at first, you may separate it by inclination from the Lime that is in the bottom, and then filtrate it through a brown Coffin of Paper, and so keep it in great Glass, or white Ware Bottels, or Stone ones if you will; provided they be all well stopped with Cork stopples.

Obs. 1. That here we quench, or slack the Quick-lime on a sudden, & all at once, & so by a great ebullition and evaporation, the Volatil Salt of the Lime is dissipated: for in this remedy

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we do not need the Volatil Salt, as we do in our Cauteries; it is enough here, that the Water be impregnated with the fixt Salt of the Quick-lime, to be fit to cleanse and dry Ulcers.

Its Use and Vertues: It consumes the superfluous humours in Ulcers; resists corruption, drys them and cicatrises them. It serves also for mealy Ring-worms, for the Itch, Scals, and Erisypelases, for Inflammations: but you must have a care to make it more or less sharp, according to the nature of the distemper, and the sensibility of the part you intend to apply it to: which to do, you need only put more or less common water, according as you will have it, more or less acrimonious: for, the force of this water is in its Salt; which you cannot sweeten but by encreasing the dose of common water, and diminishing that of the Salt. Therefore it is but trifling to make two or three Lime waters one after another upon the same Lime.

To make the Phagedenick water; put two pound of the said Quick-lime Water into a Glass Bell, or an Earthen white Ware Pan, and put to it, from half a dragm to a dragm, of Corrosive Sublimate well powdered, (in an Earthen white Ware Dish with an Earthen Pestle.) This Water, and the Sublimate, after the first stirring of them together, will become presently of an Orange colour, the Sublimate will goe to the bottom, and is called the Orange-Sublimate. If you have a desire to make your Phagedenick Water weaker, pour upon it two pounds more of Lime Water; then the wa-

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ter and the Sublimate will change their Orange colour into a Lemmon: keep this water, together with its Sublimate, in a Glass Viol well stopped for your use.

Obs. 2. That the Sublimate from white becomes yellow or orange colour, when mixt the with Lime water, because that those Sulpureous Salts, of which the Corrosive Sublimate is not devested, being to engage with the Salt of the Lime, are quickened, and so revive their colour in the conflict, so much as to communicate their tincture to the Water and Sublimate.

Its Use and Vertues: In this Water we dip Linnen, and apply it to old rotten Ulcers, full of frothy flesh, to consume the ill flesh; correct the putrefaction, cleanse and produce better flesh, and at last dry them, and bring them to cicatrize.

The Magistery of Coral.

The Salt of Coral.

TAke as much as you please of red Coral (that which is in little branches is the best) beat it to a fine powder in a Brass Mortar, and put it into a Glass, Stone, or White-ware Vessel, pour upon it, Spirit of Sulphur two or three fingers high above your Matter; let them stand together, farr from the fire, and there the Coral will

will diſſolve; while it diſſolves, there will be an ebullition with a little noiſe, which ceaſing, markes to you that the Spirit is loaden with as much of the Coral, as it is able to diſſolve; and it has loſt its great acidity and ſharpneſs. Pour off by inclination this diſſolution, and put it into a Veſſel apart, then pour new Spirit upon the *Faces*, and continue ſo doing, till you have diſſolved all the Coral. This done, put all your diſſolutions together into a Glaſs Bell, and pour upon them cold water, in ſuch quantity, and ſo often, till at laſt your water come away without any taſte; filterate that which remains through a Coffin of white Paper, upon which let it dry, or make Trochisks of it, as has been taught in the Chapter of the Diaphoretick Antimony.

Obſ. 1. That to make your diſſolutions you muſt not take an earthen glazed Pan, leſt your Spirit of Sulphur ſhould ſpend its force upon the glazing, and then black and ſpoyle your Magiſtery, nor you muſt not take a Veſſel of potters earth unglazed, becauſe that this earth being porous, would imbibe and conſume the Spirit in its poroſities: now your Stone Veſſels are of a thick, compact, Matter, and your White-ware is a kind of glaſſe.

Obſ. 2. That inſtead of Spirit of Sulphur you may uſe Spirit of Vitriol, but becauſe Vitriol naturally blacks all it comes near, your Magiſtery will not be ſo white; you may alſo make uſe of diſtilled Vinegar, or juyce of ſoure Lemmons; but we do not, becauſe we ſhould need too great a quantity

a quantity, and so it would prove dearer, and your Operation would only be longer, but not better.

Obs. 3. That the Magisteries of Crabs eyes, Pearls, Bezoard, mother of Pearl, are all made the same way as the Magistery of Coral; yet we shall give a description of some of them by another method.

Obs. 4. That both the Magistery, and the Salt of Coral, are nothing but a Calx of Coral; or a philosophick calcination of it, by the corrosion of the Spirit of Sulphur: all the difference that is between the Magistery and the Sulphur, is, that the Magistery is a Calx slackened, washed and sweetened by common water, and so freed from the acrimony of the Salt of Sulphur, whereas the Salt of Coral is a Calx, yet impregnated with some rest of Spirit of Sulphur, incorporated in it by crystallization, or not driven away by the fire in the drying; from whence it proceeds that the Magistery is insipid, but the Salt of Coral is acid and biting upon the Tongue, and from thence it has the name of Salt, though in effect it be no salt: for it is not to be dissolved in water, and is properly a Stone, salted by the impregnation with the Spirit of Sulphur: for, if you go about to dissolve it, there will be in the water nothing but some Spirit of Sulphur, so that if you continue sweetning this Salt, you will at last make the Magistery of Coral of it.

Its Use and Vertues: The Magistery and Salt of Coral have the same vertues with pure Coral; but

but they are exalted, because the body of Coral being opened, is more penetrating, and so fitter to carry its astringent corroborative faculty to the remotest parts of the body: yet it is certain, that there where the design is only to take away the Acrimony of those humours, which do corrode the Stomack, and Intestins: there, I say, ordinary Coral, well powdered, is better than its Magistery; because, that the Chymical Operation will be performed in the body, with more benefit, by those corrosive sharp humours, which meeting with the Coral, fall to dissolving of it, and so dull their own Acrimony, which is the most malignous thing in the Body. We see nevertheless by Experience too, that if upon the Magistery of Coral, you pour new Spirit of Sulphur, or of some other Acid, there will be a more sudden and stronger ebullition, though it last not so long, as in the first dissolution of Coral; and therefore, the serous sharp Humours of the body, may produce the same effect upon the Magistery. But, the Dissolvant, meeting not with so much resistance in Coral already opened, and calcin'd, as in natural Coral, does not work with so much force, and therefore dulls not its activity, nor loses so much of its Acrimony after the dissolution.

The Balsam of Saint John's Wort compounded, drawn by Spirit of Wine.

PUt into a Matrass five or six ounces of Spirit of Wine, put to it Myrrhe, Aloes, and *Sanguis Draconis*, all well powdered, of each a dragm; place your Vessel in a Sand-fire, to make your Gums dissolve; which will be done in two or three hours time, then add to them as much of the dry Flowers of Saint *John's* Wort, as you can take up with your thumb and four fingers; the Spirit of Wine, though it have dissolved the Gums, will yet extract the balsamick Tincture of the said flowers; next day take off your Vessel out of the Sand, and strain all your matter through a Linnen Cloath, by pressing it while it is warm, then dissolve in it half an ounce of *Venice* Turpentine, by setting your matter for half an hour upon a Sand-fire; thus you will have a red unctuous and mucilaginous Balsam.

Observe, That if you had extracted the Tincture of your flowers, before the Tincture of the Gums, the Spirit would have been weakned, because it would not only have been loaden with the oily part of them, but also with the flegm, and therefore would not have been able to dissolve the said Gums.

Its Use and Vertues: It is a most excellent Balsam for all green Wounds, Contusions, and for the Sciatica.

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The Corrosive Sublimate.

YOu must have two Pans of Potters-Earth unglaz'd, which must be turned up-side down, one upon the other, and be so exactly fit, as to make but one Pan in this situation; and therefore, they must have been baked together in a Potters Oven; in the uppermost, must be a hole big enough to put an Egg into; then take Quick-silver, and good refin'd Niter deflegmated, of each a pound, common Salt well decrepitated, and green Vitriol well calcin'd into red, of each half a pound; powder your Salts, and incorporate with them your Quicksilver, by beating them together in a Marble Mortar, with a woodden Pestle, and sprinkling distill'd Vinegar upon them, till you have reduced them to a kind of paste; put this paste by pieces into the Pan, by the hole left in the top, and then stop it with Lute, so as to leave only a vent of the bigness of a good big Pin; place your undermost Pan up to the brim, in the Furnace of the Fire of great Reverberation; taking care to leave in your Furnace three gaps, to give the Fire Air, *viz.* one over against the Fire-room, and one of each side, for else your Pan being set so deep into the Furnace, would go near to suffocate, and put out your Fire: give at first a strong Fire, and when you have brought it to the highest and last degree, continue it twelve hours. While the Operation lasts, you must have a care to keep open the little vent, that is left in

the Lute; you may therefore, with a Wire, gently open it from time to time, that so your matter may send forth freely, its most fiery vapours, which else would break your Vessel, and in the breaking spread such a malignity by their abundance, and sudden eruption, as would go near to infect you. After twelve hours, let your Fire go out, and when your Pan is cold, break the uppermost part of it, and you will find a loaf, two or three fingers thick, sticking to the sides of the lowermost part, as white as Snow; icy in its circumference, and crystalliz'd in its middle.

Obs. 1. That in *France* we do not make much of this Sublimate, because we can have it six times cheaper from *Venice*, where common Salt, Mercury, and Vitriol are very cheap, because they are not far from the Mines, and near the Sea. The *Hollanders* do also bring some to *Paris*, but they sophisticate it commonly with white Arsenick; We have taught to discern this cheat, in the Chapter of the dulcified Sublimate.

Obs. 2. That the Corrosive Sublimate is nothing but Quicksilver, calcin'd and incorporated with Niter, and the Spirits of common Salt, and Vitriol by the Fire, which sublimes all these volatils into one lump. The common Salt and Vitriol remain in the bottom of the lowermost Pan, almost as heavie as when they were put in, because that they are naturally fix'd; the fix'd Substance of the common Salt, and deflegmated Vitriol, serve to hinder the melting of the Niter; and the Spirits of these two serve to corrode the Mercury, and make it strongly corrosive, by

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the conjunction of all these Salts together.

Its Use and Vertues: 'Tis the strongest Corrosive of all, it serves to make the dulcified Mercury, the Emetick Powder, the Phagedenick Water, and that Unguent, which for the violence of its inflaming, and burning Operation, is called, *The Devils Unguent*: it is the poyson we call *Ratsbane*, and kills Rats and Mice by burning their entrals, as if they had live coals in them; producing the same effect in all Animals, and men too, if they swallow any of it. The Antidote of it, is not any *Theriaca*, or *Viétan*, or other Cordiall; there is nothing but Water in abundance, that by humecting and wetting the Salts, is able to take away their Acrimony, though Oyl be very good too; for, Oyl and Grease, because they cannot dissolve, and melt these Salts, make them, at least, remain without force upon those parts which are oyled or greased, as we may see in the operation of Cauteries, applyed to a very fat man; for, as soon as they have corroded the skin, they are fain to stay there, and shew their caustick vertue no further; because, they meet with the *Panicula Carnosa*, or *Adiposa*, which stayes their action, there is nothing but a wateriſh humidity, which by melting of these Salts, gives them leave to work.

The Balsam of Sulphur, drawn by the oily Spirit of Turpentine.

Put into a Matrass four ounces of Flowers of Brimstone, or else Brimstone powder'd very fine, and one pound of Spirit of Turpentine, incorporated with its Oyl, such as the Merchants send from *Provence* to *Paris*; let your Matrass be but half full, place it in a Sand-fire, and fit to it another Matrass, and so make a double Vessel. In this heat the Spirit will begin to simper, and presently after the Brimstone will melt, and dye the Spirit of a fine colour, as red as a Pomegranate: govern your Fire so, as to hinder your Spirit from boyling; in one or two hours the Operation will be done. Then take off your Vessel, and pour out your Dissolution, while it is warm, into a stone Vessel, or of glaz'd Earth; in it, the Sulphur, as it grows cold, will go to the bottom, and congeal in a yellow lump, and the Tincture will remain above; when your Tincture is cold and clear, by the falling down of the Brimstone, pour it off by inclination, and keep it in a glass Vial.

Obs. 1. That this Spirit of Turpentine has drawn not only the red Tincture, but also the ill smell of the Brimstone, so as to lose its own odour.

Obs. 2. That the Brimstone, which you find after the Operation done, weighs almost as much as when you put it in, having communicated

cated to the Spirit of Turpentine little besides the colour, and smell of Brimstone.

Its use and Vertues: It is a most excellent *Anodynum*, and Ripener for the wounds of the nervous parts, and is very good for pains in the ears, by putting some drops of it into them.

The Essence of Musk, and Ambergreece, drawn by Spirit of Wine.

Put into a small Matrass, one dragm of Ambergreece, and half a dragm of Musk, well powder'd before hand; pour upon them five ounces of Spirit of Wine, seal up your Matrass hermetically, and put it into a little earthen Pan full of Sand, up to half the belly; set it in the Sun for forty days, in the hottest time of the year, from eight of the clock in the morning, till seven at night; keeping behind your Matrass a Tin Leaf, to receive the Sun-beams, and reverberate them upon the glass. The Musk and Ambergreece will be almost quite dissolved in the Spirit of Wine, and will dye it of a red colour, like a Ruby; break the neck of your Glass, and pour out your Essence into a glass Vial, well stopp'd, and waxed, and above the stopple, put a piece of an oyled bladder.

Obs. 1. That Ambergreece being a kind of Bitumen, and Musk being of an oily nature, they may be easily dissolved in Spirit of Wine, and communicate to it their Tincture.

Its Use and Vertues: One drop of this Essence perfumes for ever, whatsoever it touches, that can imbibe it; and is much more pleasant with a double quantity of Ambergreece, than with equal parts of Musk and Ambergreece, because the odour of the Ambergreece is sweeter; and that of the Musk stronger.

The Tincture of Tartar, or Spirit of Wine clarified.

TAke as much as you please of Tartar calcin'd to whiteness, properly call'd Salt of Tartar, or of Ashes made of burnt Lees of Wine, call'd Gravell'd Ashes; put either of them into a Crucible, or unglaz'd stone Pot, place it in a Wind-Furnace, till your matter be blew, like Vitriol of *Cyprus*, which may be done in an hours time: take off your Pot, and with a brass Spoon take out your matter, and powder it while it is hot, in a brass Mortar, and then put it into a Matrass, which you must stir, and shake in your hand, to the end, the heat of the matter may extend its self equally, to all the parts of the Glass, and not break one by over-heating it. Let your Matrass have two parts empty, pour into your matter Spirit of Wine, till your Glass be half full; place this Vessel in a Sand-Furnace, giving an ordinary Fire according to Art; let it stand till the Spirit of Wine become as red as a Ruby, then pour off by inclination this Tincture

ſture, pour on more Spirit upon the *Fæces*, and reiterate this as long as the *Fæces* will yield any Tincture, there will remain a good quantity of the ſaid *Fæces*, which you may re-calcine, and uſe as other Salt of Tartar; keep your Tincture.

Obſerve, That Tartar being a ſulphureous, and inflameable Salt, may take the colour of blew, and communicate a red Tincture to the Spirit of Wine.

Its Uſe and Vertues: It is the moſt powerful, and penetrating Deſopilative that is; it produces its effect ſtrongly and gently, ſo that for the obſtructions of the Spleen, the Pancreas, the Meſentery, and the Meſaraick Veins, there is not the like Remedy amongſt *Chymiſts* nor *Galeniſts*; for, by the Spirit of Wine, it diſſolves all the moſt tenacious Viſcoſities in the little Veins, and pores of the Belly: and by the Salt of Tartar, it carries away all the impurities of the ſaid parts, ſo that no Soap can cleanſe more than this Tincture. Its uſe is to be diſſolved from ten to thirty drops, in ſome Broth, or appropriated Water, to take every morning faſting for ſome dayes.

The Spirit, and fœtid Oyl of Tartar.

TAke a glaſs Retort luted up to half its neck, if you do make but a little of this Remedy, or if you make a great deal, take a Stone one, fill it up to the neck with good Tartar of *Montpellier*, either

either red or white, beaten to a fine powder: place your Retort upon a pot-cover full of Ashes, in the small reverberatory Furnace, if you use but two or three pounds; or in an earthen Bowl, in a great circulatory Fire, if you use but half a pound: fit a Receiver, and give your Fire by degrees; there will soon come forth a white dark vapour, which will continue all the time of the Operation; the Flegm comes first, then the Tartar takes fire in the Retort, and is in a flame, and from the smoak of this flame, come the Spirit and Oyl. Continue your Fire, till there come no more out of the Retort, and till your Receiver be clear, and cold, though the Fire be violent under the Retort: out of one pound of Tartar, you will draw about ten ounces of Spirit, with its Flegm, and two ounces of Oyl; in the Retort will remain four ounces of a black Salt, which you must dissolve in Water, then filtrate and coagulate to use, as the true Salt of Tartar, being entirely devested of its Flegm, Spirit, and Oyl, and so being a pure Salt; for the Tartar contains but very little *Fæces*, or Earth.

Observe, That in this Operation, we perceive, that Tartar is a very sulphureous Salt, since it takes fire in the Retort, and there comes from it a blackish Oyl, stinking, and inflameable, and that the *Fæces* do remain black, & burnt in the Retort.

Its Use and Vertues: This Oyl is indifferently stinking, & caustick; it serves for Ring-worms, and the exfoliation of Bones, or for Farsey in Horses: the Spirit is acid, when rectified, and is good against the Stone and Gravel.

The

The Spirit and Aromatick Oyl of Juniper Berryes.

Put fresh Juniper Berryes into a Brass Vesica, til it be half full, fill one third more of the Vesica with common cold water, let them infuse twenty four hours in the Vesica, with a gentle fire, to extract afterwards the better the oily essence of your Berries, having all this while stopt the mouth of your Vesica, with a Linnen cloth; take out this cloth, & fit to your Brass body its Mores-head, border'd with a refrigeratory, and a moveable Pipe, and do as has been taught in the distillation of the waters of Plants; that which will first come, will be the Aromatick, Balsamick Essence, or Oyl of Juniper Bayes, together with a little flegm, or inflegmated Spirit; and then the rest of the flegme will follow. Out of a peck of Berries, you will not have above two ounces of Essence, or Oyl, all the rest will be flegm, or Spirit inflegmatized.

Obs. 1. That because we can draw but a very small quantity of Oyl or Essence, not only out of Juniper Berries, but also out of all Balsamick, and Aromatick Leaves, Flowers, Rinds, Barks, Rootes, Woods, Berries, and Seeds, therefore we have found the way of using Spirit of Turpentine, separated by three or four Rectifications from its red Oyl, putting three or four ounces upon every peck of Berries; to the end that being incorporated with the Essence of Juniper, it may augment, and encrease the quantity of the said

said Essence, and yet not change its qualities; but if you should put more than three or four ounces of this Spirit on a peck of Berries, the smell of the Turpentine would predominate, and so spoil your Essence: thus the Provensals prepare and multiply their Essences, and by affording them cheap, make them become common. But I could wish that they would leave off sophisticating them, and sell them as dear as they stand them in, and are really worth; particularly, those Essences that are to be taken inwardly; but the covetousness of those that sell, and the sparing way of the buyers, will never give way to this.

Observe, That when you have put to your Berries the Spirit of Turpentine well rectified; the first liquor that comes is the said Spirit impregnated with the oily Essence of your Juniper Berries.

Obs. 2. That there are two waies to separate the oily Essence from its flegm. The first, is by a glass Tunnel or a Coffin of brown Paper wet before hand with common water; or with the Spirit of your Berries, as it has been said before: only observe, that most of the Essences do swim upon their flegm, and therefore, that in separating them by the glass Tunnel, the first thing that runs out, must be the flegme; and by the Coffin, 'tis also the flegme that goes through; the Oyl remains; which you draw out by making a hole in your Paper Coffin towards the bottom, and holding a glass Viol under to receive your Oyl.

The

The second way is, to put into a glass Matrass, with a short neck, all the flegme, with which the Oyl is distilled; and then make a rowl of Cotton like the Wick of a Candle; of which put one end into your Matrass, to make it touch the said Essence, and let the other end hang into a glass Viol, tied with a pack-thred to the neck of the Matrass: your Essence, will by little and little imbibe the Cotton, and at last run quite through it, till it come out at the other end, and fall by drops into your Vial.

Obs. 3. That the Balsamick, and Aromatick Essence, or Oyl of Juniper, as of all other Balsomicks, and Aromaticks, is nothing but the subtlest part of its Sulphur and Volatil Salt, because of its Sulphur it retaines the smell of the Berries, & the yellow colour of their Tincture, and because of its volatil Salt, it retaines the taste, and *Acrimony* of the said Berries; in these two the Salt, and Sulphur, consists the excellence of this simple; but, because the Oyl of Juniper has but little Salt, therefore it swims upon its flegm, and having been drawn by common water, it has preserved the natural smell, savour, and tincture of the Berries; and thus it happens to all drogues of this nature: for, if you distill them in a naked fire without water, there will come from them a stinking caustick Oyl, as we have taught in the Chapter of the distillation of the stinking Oyl of Cloves. But before this stinking Oyl, we do ordinarily draw from Aromatick drogues by the *intermedium* of water, all their Essence and Balsamick Oyl, which is a kind of Virgin Oyl, being

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ing the purest part of them. After its extraction, there remains yet in the *Fæces* a thick gross terestriall saltish Oyl, which we draw without by *intermedium* distillation *ad latus* in a glass Retort luted in a naked fire: and because this Oyl is drawn without *intermedium* in a naked fire, and by the combustion and flagration of the said Drugs, therefore it is black and stinking, and of an ill taste, and much more caustick than the Aromatick oyl, which containes less of the Volatil Salt, the flegm having shared a good part of the said Salt, with the Oyl; but in the foetid Oyl, the Volatil Salt, is as it were shut in, and not carried away by its flegm, whereof it has very little.

If you rectifie your Essence of Juniper in a little glasse Retort in a sand fire, there will come off a Spirit, which is the Spirit of Turpentine, which you had added to it, and there will remain in the Retort a pure Essence of Juniper as yellow as Gold, and as thick as true Balsam.

Its Use and Virtues: the Essence of Juniper Berries helps the Tooth ach, Deafness, the Rot of the Bones, the Collick, and the Gravel. Its flegm, or Spirit, serve to prepare the extract of Juniper, as we shall teach hereafter.

The Aromatick Essence of Cloves, Cinnamon, Pepper, Aniseed, Fennel-seed, Rosmary-leaves, Thyme, Marjorum, Savin, Jesmin-Flowers, Orange flowers, Orange and Lemmon Peeles; and generally of all Roots, Barks, Rinds, Woods, Berries, Seeds, Leaves, and Aromatick Flowers, whose

whose oily Tincture may be easily extracted in water, are drawn the same way, as that of Juniper Berries: but those Woods, Roots, and Barks that are of a thicker and more compact substance, and which will not easily yield their oily Tincture in water, must be used without water, in a Retort and naked fire, to extract their Oyl, which by consequent must be black, stinking, and caustick as the Oyl of the Wood, and Bark of Guaiac, &c.

The stinging and Black Oyl of Juniper.

FIll a Stone or Glass Retort luted, with the Berries of Juniper, that have already yieled their Aromatick Oyl. Place it upon an earthen Bowle full of ashes, in a small Reverberatory furnace, there will come abundance of white Vapours, which in the Receiver will dissolve, some into an acid Spirit, and some into a Black Oyl, stinking, and caustick,: Out of a pound of Berries, you will have about two ounces of this Oyl, and twelve of acid Spirit, and if you use fresh Berries, that have not served, you will have the double of stinking Oyl: separate by a glass Tunnel the Oyl from the Spirit.

Its Use and Vertues: The Oyl is good for Ring-wormes, for the Tooth-ach, the Rot of the Bones, and all old Ulcers.

The

The Extract of Juniper.

Put into the Brass Vesica, or double glasse Vessel, a peck of Juniper Berries fresh gathered; and pour upon them distilled water of Juniper, three or four fingers high above them: if you have not enough of the said Water, you may supply your want with common water. Place your Vesica in a circulary fire, or in any of the Reverberatory Furnaces with a small fire, or if you use a double glass Vessel, set it in a sand Furnace with a good fire; there let it stand twenty four hours, till the tincture be extracted; which pour off gently into a Brass Basin, or into an Earthen Pan; place it upon a little Furnace over a naked fire; and make it boyl as soon as you can; when it boyles, throw into it five or six whites of Eggs, with the Egg-shells, and so continue to make it boyle, till your whites of Eggs be hard, and loaden with the *Fæces* of the Tincture, then pour off this clarified Tincture, from its drags, and strain it through a Linnen, or Flannel strainer; hindring your whites of Eggs from coming away with the Tincture into the stone Pan you receive it in; then evaporate it gently in a sand Furnace to the consistence of an extract; a Stone Pan is fitter than a glazed Earthen one, because the stone one is much thinner in the bottom, and every where, than a glazed one, and may therefore be sooner penetrated by a sand heat.

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Its Use and Vertues: This extract is called the *Germans* Treacle, because that in *Germany* they use it frequently as we do here Treacle; and it is indeed a great preservative against the Plague, and a rare Antidote against poisons; it strengthens the stomack: the dose is from a scruple to two dragmes.

All extracts of Berries, Leaves, and Flowers, are made the same way.

The Laudanum.

TAke four ounces of good Opium, and if it be soft, cut it into pieces with a Knife; or if it be dry, powder it in a Mortar, and have a care, that the powder rising, do not at last work upon you the same effect that a double Dose of pills of Opium would do. Put this Opium without any other preparation into a Matrass, and pour upon it Spirit of Wine, till it be four or five fingers above your matter, and that your Matrass have a third part empty, lest your menstruum, in stead of extracting the Tincture, should evaporate and be gone. Place your Vessel in a sand Furnace, up to half the belly in the sand, fit to it another little Matrass, and so form a double vessel; lute them well together with Paper and Glew, that so nothing may exhale: make a good fire, and let your Vessel stand a whole day, the next day separate your Tincture from its

Fæces, and pour new Spirit of Wine to them, which alſo muſt ſtand a day, and then be poured off, then for a third time, put new Spirit of Wine to extract the remainder of the Tincture, which done, put all your Tinctures together into a ſtone pan. Place this Pan, either in a ſand Furnace, or in a *Balneum Mariæ*; if it happen that you are then diſtilling of Spirit of Wine in the Braſs Veſica, you may place your Pan upon the Moors-head, which may ſerve in ſtead of a *Balneum Mariæ*; evaporate gently your Tinctures to the conſiſtence of an extract: If you deſire to draw off moſt of your ſpirit of Wine, put your Tinctures at firſt into a glaſs cucurbit, and diſtill them in a ſand fire, till they begin to grow thick; and then pour them into a Stone Pan, and evaporate them, as has been ſaid.

Obſ. 1. That all thoſe preparations practiſed upon Opium ordinarily, doe rather cleanſe it, and purifie it from it *Fæces*, than free it from any venemous ſubſtance, or malignous quality; therefore if you take of that Opium which is in little even Cakes, neatly environd with Leaves; you may give it without any other preparation at all, only beat it warm in a Mortar, and ſo form Pills of it.

Obſ. 2. That in the belief that moſt have, that the thin Volatil ſubſtance of Opium, is that which cauſes its malignity, they have ſtudied, all waies imaginable, whereby to deveſt it of this Volatil ſubſtance; as by drying it over the fire, and ſo cauſing this Sulphureous ſubtile ſub-

ſtance

ſtance to evaporate, but it is not againſt reaſon to believe, that in this exſiccation, or drying, the flegm alone, which is innocent enough, is the thing exhal'd, and that Opium in its whole ſubſtance is of a ſubtle, Volatil, Narcotick nature, and in that conſiſts its Malignity.

Obſ. 3. That we uſe Spirit of Wine for a diſſolvant, becauſe it draws much more perfectly this Tincture than any other liquor would, becauſe that Opium is of a thick, glutinous, juicy nature, and Spirit of Wine, is the beſt diſſolver of all Gumms: beſides the deſign being to benumb the ſenſes, the Spirit of Wine, which has the ſame faculty is moſt proper, and being a cordial is a rare corrective of that malignity which we ſuppoſe in Opium. Some are of opinion, that diſtilled Vinegar would be a fitter menſtruum, becauſe they pretend by it to fix a little the Volatil nature of the Opium, and hinder the fumes which make it to ariſe to the head. To which I anſwer, with this diſtinction, That if the deſign be to appeaſe the Head-ach, and correct *Inſomniums*, then *Laudanum* prepared with Spirit of Wine is beſt; but if it be to ſtop a Diarrhæa, or Dyſentery, or aſſwage the pains of the Colliek, then *Laudanum* prepared with Vinegar is fitteſt; becauſe the Spirit of Wine carries one to the Head, and the Vinegar keeps the other down in the Belly: but we muſt have one of theſe menſtruums, if we will extract the Tincture of Opium well: for pure Vinegar ſmells too much of Vinegar; common water is not ſtrong enough, becauſe of the viſ-

cosity of the Opium, which requires a penetrating dissolvant.

Obs. 4. That if your Opium be very clean, and without Ordure, it will turn almost all of it into Tincture, and leave but very few *Fæces*: and so the extract of Opium is but a purified Opium, delivered from all mixture of other things, and devested of some of its own indissolvable terrestreity.

Obs. 5. That in Authors, you meet with an infinite number of descriptions of *Laudanum*; and all the variety is produced from nothing, but from a different mixtion of ingredients; but certainly the best *Laudanum* is the simplest, and such as we have described it. Saffron, Pearls, Corral, Treacle, Musk, Amber-grease, and other ingredients which are added, serving for nothing but to take up more roome, and often are quite opposite and contrary to the design intended by giving Opium, so farr they are from augmenting the vertue of it.

Its Use and Vertues are, to make those sleep that are troubled with continuall waking, and intolerable *Insomniums*, not to be overcome by ordinary *Somniferous* remedies; to aswage great head-ach, to thicken and soften all sharp humours flowing to the breast, to stay loosnesses, dysenteries, & help paines in bilious collicks, & Dysenteries. But have a care you give not *Laudanum* while the body is full, and has not been evacuated sufficiently by Blood-letting, Clysters, and a moderate diet; nor when there is a copious Fluxion upon the breast, caused by a thick humour, nor when

when there is pain and stopping of breath, nor when the patient is very weak, and has but little natural heat. The dose is from one grain to two, or three, or four at most, and you must never give the highest dose, without having given the first and second without effect; it is ordinarily given in form of a little Pill.

The Tincture of Roses.

Put into a Brass Pot, or into an earthen glazed pan, four pound, or two quarts of water; set it upon a Furnace in a naked fire, till it begin to simper, and then put into it two or three spoonfuls of Spirit of Sulphur or Vitriol, and stirr it with a woodden *Spatula*, to the bottom, then throw into it a good handfull of red dry Roses of the year you are in, and stirr all together again with your *Spatula*, and so let them stand till the water begin to boyl, then take off your vessel, cover it, and when the matter is cold, strain your Tincture through a cloth, or a Coffin of brown Paper, it will be as red as a Ruby, and will keep four or five months without danger of corruption.

Obs. 1. That if you did put your Roses into the water, before the Spirit of Sulphur, or Vitriol, you would lose your Spirit afterwards in the Roses, without effect, but the water being sharpned first, is fit to extract and revive the Tincture of the Roses.

Its Use and Vertues: It is a very pleasant

cooler, being Cordial, and strengthening, and most excellent for the Liver, the Kidneys and the Stomack.

The Milke, or Precipitate, or Magistery of Brimstone.

TAke four ounces of Flowers of Brimstone, and sixteen ounces of common Salt decrepitated and powdered, mingle them well together: which, that you may the better doe, put a spoonfull of each at a time upon a Marble stone, and there grind them to an impalpable powder: wet this powder drop by drop with distilled Vinegar, till you have reduced all into the consistence of Pap, or hasty Pudding, then scrape it together with a piece of Horn, and continue doing thus, till all your matter be grown'd, and thus prepared: in the mean time, boyl six pound or three quarts of common water, in a Brass Kettle, and when the water boyls, throw in all this lump of Matter, and after it has boyl'd a little, add to it half an ounce of white Roch-Alom in powder, and stirr it with a woodden *Spatula*, keeping your Kettle on the fire, till all be dissolved in the water, which then will be of reddish muddy colour; and this will happen in half an hours time, then take off the Kettle, let your dissolution coole; in cooling, the Brimstone will precipitate to the bottom in a whitish colour: when

when it is all precipitated, pour off gently the water, which will be impregnated with the common Salt and Alom: pour common water upon your whitiſh Matter to ſweeten it, and do ſo, till the water come away inſipid, and that the matter be entirely freed from the *Acrimony* of the Vinegar, Alom, and common Salt: filtrate that which remains through a Coffin of white Paper, or through a glaſs Tunnel, as has been taught heretofore; and you have the Precipitate or Magiſtery of Brimſtone.

Obſ. 1. That our deſign being here to open and whiten the body of Brimſtone, we uſe the flowers of Brimſtone; becauſe, that by reaſon of their impalpability, which they have contracted in their ſublimation, they are fitter to be incorporated with common Salt, and to become white, than common Brimſtone would be, which would be very hard to be powdered ſo fine, as the flowers of Brimſton are already.

Obſ. 2. That we uſe common Salt, to open, calcine, and whiten the body of Brimſtone, and we uſe it decrepitated, and three times as much in quantity as the flowers of Brimſtone, to the end it may do its work the better: for the furthering of which we alſo add diſtilled Vinegar, which quickens the common Salt, by incorporating it with the Sulphur.

Obſ. 3. That for this incorporation we uſe not a Braſs Mortar, becauſe it might black the powder by the attraction of the Tincture of the Mettal, but we uſe a Marble & ſtone one, where the fineſt things may be eaſily made

finer, so that a hair might be broken upon it.

Obs. 4. That Brimstone alone would never dissolve in water, though never so exactly powder'd, because that being exteriourly of a greasie, oleaginous nature, and its Salt being altogether buried in its own substance, all the waies of being dissolv'd are taken away from it. But if you add to it common Salt, by means of the distilled Vinegar, and the Levigation of it, then all being one body, it happens that the Salt and Vinegar in their dissolution, do engage the Brimston to dissolve at the same time; but then it is necessary, that your water should boyl some time, to hasten the dissolution of these bodies, and so the Sulphur being a little opened, and calcin'd by the common Salt and vinegar, does at last afford its Tincture to the said water.

Obs. 5. During the ebullition of the common Salt and brimstone in the common water, we add a little Alom, to whiten and scowre the Brimstone, for Alom is a very dry white Salt, and Brimstone quite contrary, is a very oily mucilaginous one; we do not use *Roman* Alom, because that it is red, and would communicate its colour to the Magistery of Brimstone, which ought to be white by reason of the common Salt.

Obs. 6. That the Brimstone is precipitated all alone without any Precipitant, as soon as the water growes cold, because its dissolution in water was not perfect, and the strength of the Salts being dulled by the coldness of the water, they can no longer retain the brimstone above water.

Obs. 7. That the Precipitate, or Magistery of Brimstone

Brimſtone, is but Brimſtone Philoſophically calcin'd by common Salt, and diſtilled Vinegar, and ſcoured by Alom, then ſweetened by waſhings, and ſo whitened in form of a powder.

Its Uſe and Vertues: Tis an excellent dryer, or diſſicative for all Ulcers, and therefore is fitter to make the Balſam of Brimſtone, either with Spirit of Turpentine, or with Walnut-Oyl, than ordinary Brimſtone, or the Flowers of Brimſtone: It is particularly good againſt all Ulcers of the Lungs, to ripen the fluxions that fall upon the Breaſt, and help the expectoration of Flegms, and alſo to dry away the humors which flow that way. It may be taken either in a ſpoonful of Syrup, or in ſome Conſerve, or you powder with it a Toaſt ſpread with freſh Butter, or Oyl. The Doſis is, from half a dragm to a dragm. And if at the ſame time, you will ſtrengthen the Stomack, and gently looſen the Belly, you add half a dragm of Rhubarb in powder, upon your Toaſt; you may put it into a ſpoonful of ſome pectoral Water; but it is not ſo eaſie this way, becauſe, by its lightneſs, it ſwims upon the Water; and that ſo, in ſtead of ſwallowing it, a good deal will remain in your mouth. You may likewiſe uſe it in a *Pomatum*, againſt the Itch, and Scabs, becauſe, that this Brimſtone hath acquired, not only a ſingular whiteneſs, but has alſo loſt all its ill ſmell, which makes all the Unguents and Balſams of Sulphur ſo ſtinking and unpleaſant: but it would be a dear Unguent, becauſe, you can hardly prepare much of this Magiſtery at once, nor without great pains and coſt.

The Magiſtery of Pearls.

TAke one ounce of Oriental Pearls, which are better, and much dearer than the Occidental; reduce them to a fine powder, in a braſs Mortar, which muſt be covered with a leather Cover, in which is a hole to put your Peſtle in; put this powder into a Glaſs precipitatory Veſſel, and pour to it Spirit of Sulphur, or diſtilled Vinegar, or juice of Lemmons, four or five fingers high above the matter; there will preſently be cauſed a little ſimpring, or boyling, which ended, ſtir your matter with a ſtick; then ſuffering it to ſettle a little, pour off your Diſſolvant, which will be loaded with ſome part of the ſaid powder of Pearls, and will be as white as Milk.

Pour more Diſſolvant upon the matter left, and do as at firſt, continuing this Operation, till all your powder be diſſolved; then gather together all your Diſſolutions, in the ſame precipitatory Veſſel, or in another, if you will, and pour upon them great quantity of common water divers times, to ſweeten and waſh the ſaid Diſſolution, and continue this, till the Water have carried away all the Acrimony of the Diſſolvant. After you have poured out the laſt Water, your matter will remain like Pap; which put into a paper Coffin, and there let it dry in the ſhade upon a Sieve; you will have the Magiſtery of Pearls, as white as Snow, in little miſ-ſhapen pieces, which

which you may keep as they are, or elſe powder them: or if you pleaſe, you may at firſt, before your matter be dry, form them into Trochisks, as has been taught.

Obſ. 1. That we reduce the Pearls to a fine powder, that they may be eaſilier diſſolved, by a leſs quantity of Diſſolvant; in the powdering of them, the Mortar is covered, becauſe, that Pearls being ſmall, and round, and hard, would in beating, be apt to leap out of the Mortar, and be loſt, if it were not covered.

Obſ. 2. That we rather uſe here Spirit of Sulphur, than diſtill'd Vinegar, or juice of Lemmon; becauſe it diſſolves them eaſilier than either of the other, inſomuch, that one pound of Spirit of Sulphur, will ſooner diſſolve an ounce of Pearls, than twelve pound of diſtilled Vinegar, or juice of Lemmons; beſides, that the Spirit of Sulphur is more cordial and pectoral than either of them.

Obſ. 3. That the Spirits of Salt, Niter, and Vitriol, are not proper for this Operation, becauſe of their too great corroſive faculties, which would go near to reſt in the Magiſtery, and then we ſhould be obliged to ſweeten it ſo long, till at laſt the Water of the Lotion would carry away with it a good part of the Magiſtery. We may ſay as much of the Oyl of Tartar, made *per deliquium*, in a wet place, or by the diſſolution of the Salt of Tartar in common Water; beſides, the Spirit of Vitriol, would black the whiteneſs of the Magiſtery, and the Oyl of Tartar would make it rough to the feeling.

Obſ. 4.

Obs. 4. That common Water is sufficient to precipitate the said Magistery, and weaken the Spirit of Sulphur, so as to make it lose its hold; because, that the dissolution of Pearls, by the said Spirit, having been performed without the help of an external heat, and without any great penetration, there is no need of any strong fight between the Dissolvant, and the Precipitant.

Obs. 5. That the Water of the first sweetning, has a little smell of Ambergreece, if the dissolution be with the Spirit of Sulphur: for, Pearls opened by this Spirit, have such a smell.

Its Use and Vertues: This Magistery is a great Cordial against all venemous Feavers, the Small Pox in Children, the pains of the Spleen; it is likewise good for Consumptive persons, and against Loathings, and desires to vomit, caused by sharp serosities. The Dose is from a scruple to a dragm. It is also a *Fucus*, being mingled with some proper *Pomatum.*

Some brag, with ostentation, of a Water of Pearls; but it can be nothing else, but this Magistery, mingled with some Cordial Water, which, if stirred, becomes as white as Milk; for, as for the true Milk of Pearls, which is the Dissolution of Pearls, in the Spirit of Brimstone, it cannot properly be called Water of Pearls; because, that by reason of its sharpness, it is not potable. The Water of the first Lotion of your Magistery, is excellent to scour and whiten the hands.

The Calx of Oyſter-ſhells.

TAke of the uppermoſt part of Oyſter-ſhells, what quantity you pleaſe, waſh them, and cleanſe them in warm Water, and let them dry upon a Lettice in the Sun. Then take ſix or eight Tiles, made in the form of a half-Circle, of ſuch a proportion, as that two of them joyn'd together, may fill the inward Round of the Laboratory of a Reverberatory Furnace, leaving the ſpace of an inch empty, between the ſides of the Furnace, and the ſaid Tiles, to give the fire play round about, and betwixt the ſaid Tiles; for, there muſt be alſo in two or three places of their Circumference, a Brim of an inch deep, to let the flame in to calcine thoſe matters that ſhall be ſet upon them. Place two of theſe Tiles upon the Iron Bars of the Laboratory, and upon them place three or four other rows of Tiles, loaden with Oyſter-ſhells, one upon another, ſo as there be half a foot left empty of the top of the Laboratory; then cover your Laboratory with an earthen Pan, turn'd upſide down, in whoſe bottom is a hole: give a great Fire at firſt, with Wood and Coals, and when it is come to the laſt degree, continue that twelve hours; the flame paſſing upon your Oyſter-ſhells, will calcine them, and reduce them into a Calx, as white as Snow, and ſo brittle, as to fall into powder if you touch it.

Obſ. 1. That we take only the upper part of the Oyſter-

Oyster-shells, because that part is whiter, and thinner, and easier to calcine, than the lower part.

Obs. 2. That we wash them in warm Water, before we calcine them, that we may scour them, and cleanse them from a certain mucilaginous ordure, which in the calcining, would leave a blackness, and spoil the beauty of your Calx. If you desire to scour your Oyster-shells a better way, after you have washed them in warm Water, put them into a stone Pan, and pour upon them distilled Vinegar, one finger high over the matter, and so let them soak one day, then take them out, and dry them in the Sun, before you calcine them.

Obs. 3. That the Calx of Oyster-shells is very Salt, so that by the same method, that we draw the Salt of Vegetables and Animals, we may likewise draw this Salt in good quantity; that is, by dissolution in common Water, filtration, and evaporation of your *Lixivium*, till it be dry. This Calx is composed of two substances, *viz.* of a good deal of white Virginal Earth, and of a good deal of Salt, both fix and volatil; by means of which, the said Oyster-shells are naturally heavie.

Its Use and Vertues: This Calx is most excellent for the Gravel, because of its Salt; it is very opening, and dries up (by means of the two substances it is composed of) all superfluous humidities of the Body. The Dose is, from twenty to thirty Grains in some Conserve, Preserve, or Syrup.

The

The Magiſtery and Calx of Egg-ſhells.

TAke a good ſufficient quantity of the ſhells of Hens Eggs new-laid, and clean, waſh them in fair Water, and then dry them, as we do Oyſter-ſhells; put them into a ſtone Pan, or a glaſs Bell, and pour upon them Spirit of Vinegar, that is, diſtilled Vinegar, ſeparated from its Flegm, five or ſix fingers above the matter; it will preſently begin to ſimper, and will diſſolve the Egg-ſhells: as ſoon as it has done, and that by laying your Ear to, you perceive no more noiſe, then your Egg-ſhells are diſſolved, and the Diſſolvant is loaden with its proportion of the diſſolved ſubſtance, and has loſt its Acrimony, and ſharpneſs in the combat. This done, ſtir your matter with a woodden *Spatula*, and by this agitation, your Diſſolution will be turned into white Curds. Let it ſettle, and then pour off this curdled Diſſolution, into a ſtone Glaſs, or White-ware Veſſel; after which, pour on more Vinegar, and do as at firſt, till all your matter is diſſolved. Having put all your Diſſolutions into one Veſſel, pour upon them a great quantity of clear cold Water; ſtirring them with a wooden *Spatula*, the Water will become at firſt, as white as Milk, and the Magiſtery will precipitate to the bottom, then the Water will be clear and ſowriſh: pour off this Water, and pour on more, till you have entirely ſweetened your Magiſtery,

Magistery, and that your Water come away insipid: put the remainder into a Coffin of white Paper, through which, the Water that remains, will filtrate; and you will have remaining, the Magistery of Egg-shells, which you must dry in the shade, upon the bottom of a Sieve.

To make the Simple Calx of Egg-shells; Take a good quantity of the newest, and cleanest, well washed, and dried, bruise them between your hands, and fill with them an earthen Pot unglazed; which, set in a Potters Oven, for nine dayes, and you will have a Calx as white as Snow.

Obs. 1. That you must take new and clean Egg-shells, to the end, that being free from all soyling, and durt, the Spirit of Vinegar may the easilier corrode them; for, all smoot and ordure in a thing, does dull the action of a Dissolvant; and if you should calcine them with this ordure upon them, they would grow black, and spoil your Calx.

Obs. 2. That you must use the Egg-shells of Hens, and not of Ducks, Geese, or Turkeys, because, that Hens Egg-shells are easilier calcined, being thinner, by reason that a Hen is a more temperate Animal; Water-fowl are hotter, and by reason of their heat, do concoct, and harden their Egg-shells more than other Fowl; and from thence comes, that you must have a greater quantity of your Dissolvant, employ more heat, and spend more time to calcine the Eggs of Water-fowl, than of Hens, whose Egg-shells do also produce a whiter Calx than any of the others.

Obs. 3.

Obſ. 3. That we uſe here Spirit of Vinegar deflegmated, to diſſolve the ſaid Egg-ſhells; for, if it were un-deflegmated, it would not be ſtrong enough to corrode the hardneſs of the Egg-ſhels; you might uſe Spirit of Sulphur, but it is too dear; and Egg-ſhells are not ſo hard, but that they may be diſſolved by a weaker Diſſolvant, than Spirit of Sulphur, or Spirit of Niter, which would do well, and produce a very white Calx: but for Spirit of Vitriol, and *Aqua fortis*, they would altogether ſpoil your Operation, by communicating a blackneſs to your Calx, which ought to be extreme white.

Obſ. 4. That the Magiſtery of Egg-ſhels, is nothing, but Egg-ſhells Philoſophically calcin'd by their diſſolution in Spirit of Vinegar, then precipitated by the cold Water, into a white Calx, and ſweetened by reiterated Lotions, then filtred and dryed in the ſhade. As for the ſimple Calx of Egg-ſhells, it is a calcination of them, made by a ſtrong Fire of nine days, ſo as to be reduced into a ſubſtance, containing much of white Virginal Earth, and a little Salt. If you waſh this Calx, you take from it all its Salt and ſharpneſs, and there will remain an inſipid Virginal Earth, of the nature of the Magiſtery.

Its Uſe and Vertues: It it a good deſiccative which dries up Ulcers without corroſion; therefore it is very good for theſe Ulcers that affect that Coat of the Eye, called *Cornea*: it is alſo a very good *Fucus*, for if you rub your hand and face with it, without mingling it with any *Pomatum*, it will ſo inſinuate its ſelfe

into the pores, as to produce a rare whiteness.

The calcination of Venice *Tale.*

TAke four ounces of *Venice* Tale; which crumble between your Fingers; then take four pound of whole River-pibbles, not of the biggest, nor of the least size, put into a white Leather Bagg, gathered at each end, both your Pibble-stones, and your Tale, and then shake it, as the Pin-makers do, when they whiten their Pins: do this for an hour; then take out your Tale, and put it into a Silken Sieve, and searce it; take that which could not pass through, and put into the bagg, and so shake it again, as at first; then searce it, and do thus, till all your Tale be reduced to a white impalpable powder, like Meal-dust.

Obs. 1. That we use here a bagg of Sheepsskin, white and clean, and well dressed; because, that a bagg of black Leather would black your powder; and so would it do, if it were not very clean, and well dressed; a linnen bagg would not be fit, because that the finest part of the powder would go through it, besides the danger of its breaking, or wearing out in this agitation.

Obs. 2. That we use River-pibbles, and not Mountain ones, because, that the River ones are whiter, harder, and smoother than other, and therefore fitter for this Operation.

Obs. 3. That *Venice* Tale is improperly said to be

be calcin'd by this Operation; for, it is nothing but Tale very well powder'd, by this ingenious method, which reduces it into a finer, and whiter substance, than could be done by a Pestle in a brass Mortar, nor by a violent fire, and tedious calcination.

Its Use and Vertues: It is the finest of all Fucuses, to apply, without *Pomatum*, to the skin, penetrating the pores, and sticking to them by its unctuosity or oylinesse more than any other. It may be useful other ways too.

The Salt of Venice *Crystal.*

TAke one pound of the transparentest Crystal, put it into a Crucible of a reasonable size, and set it in a great reverberatory Furnace, for eight hours, till it be melted down; then take off your Crucible, and when it is cold, break it, and take out your matter, which in a brass mortar, you must reduce to an impalpable powder; mingle this powder with its weight of Nitar, well purified and reduced to powder; put them in a Crucible, which set in the same Furnace, and cover it with a little earthen cover; continue a reverberatory Fire for six and thirty hours together, or, till the matter yields no more fumes: then take off your Crucible, and presently break it, and powder your matter in a brass Mortar, while it is warm: then throw it by spoonfuls into a Kettle full of boyling Water, and there let it boyl, till

your Water be half conſumed away; filter the ſaid diſſolution, while it is warm, through a coffin of brown Paper: evaporate your filtration by a good fire, either in the ſame Kettle, or in an earthen-glaz'd Pan, till there remain nothing but a powder, as white as flower, in the bottom of the veſſel; taking care to ſtir the ſaid powder with an iron *Spatula*, leſt by ſo great a fire it ſhould melt again.

Obſ. 1. That we take here *Venice* Cryſtal, becauſe it is the beſt.

Obſ. 2. That we calcine firſt the Cryſtal in a great reverberatory fire, till it be melted, to the end, we may ſo open it, as to be able to reduce it to an impalpable powder, and ſo make it fit to be calcined by the Niter.

Obſ. 3. That we calcine a ſecond time the ſaid Cryſtal with fine Niter, to open its body better, and ſo the Niter may communicate to it its fix'd Salt, and that of the body of the Cryſtal, and of the body of the fix'd Salt of Niter, there reſult one Body, and one Calx.

Obſ. 4. That we diſſolve this Calx of niter'd Cryſtal in hot Water, and afterwards, we filter it, and then evaporate it to a dry powder, to the end, that by this diſſolution and filtration, the ſalt of Niter be whiter.

Obſ. 5. That this Salt of Cryſtal, is nothing but Cryſtal incorporated with the fix'd Salt of Niter; ſo that it is more properly a Calx, than a pure Salt. The Cryſtal communicates nothing but its Virginal Earth, and the Niter, nothing but its fixt Salt; and therefore, Cryſtal containing in it

ſel

ſelf no ſalt at all, this Remedy ought more properly, to be called *Cryſtal niter'd.*

Cryſtal is a clear tranſparent Glaſs, and Glaſs is a Cryſtal leſs clear, and tranſparent; the onely ſubject matter of both of them made by Art, is a congealed Virginal Earth, hardened under the form of Pibble Stones, and Cryſtalline River Sand. This matter cannot be melted, and purified, but by the Salts both of Vegetables and Minerals; and after the fuſion, and vitrification of the ſaid Sand, and Pibble Stones, all the Salt is ſeparated, and comes away from it, ſo as there remains not any in either Glaſs, or Cryſtal.

Its Uſe and Vertues: It is a powerful Diuretick, it drives away Gravel, and breaks the britle Stones of the Kidney; it dryes up Gonorrhæa's.

The Salts of Coral, Pearls, fragment of Rubies, Topaz Stones, Emeralds, Diamonds, and other precious Stones, are to be prepared in the ſame way, and have the ſame vertues with the Salt of Cryſtal, by reaſon of their calcination, and alſo the Diuretick and Lithontriptick, or Stone-breaking vertue of the fix'd Salt of Niter.

The Flowers of Benjamin.

TAke as much powdered Benjamin, as you pleaſe, put it into a Crucible, proportioned to the quantity of your matter, ſo as it

Here is the Figure of your Iron Round.

be but half full: put your Crucible into a Round Iron, that has two branches on each side, which must be placed upon the second row of Bricks of a circulatory Furnace, so that your Crucible be suspended in the middle of the Furnace, and the fire must strike immediately upon it: fit to the top of your Furnace, a great earthen Coffin (glaz'd or unglaz'd) made like a mould for a Sugar-loaf, as broad in the bottom as the Furnace, and in its top must be left a little hole, to give the fire air; lute it to the Furnace, give a moderate fire under the Crucible; the Benjamin will rise presently, and totally in dry fumes, which will stick to the sides of your Coffin, in form of a white Snow, or Meal-dust, which will have the odour of your Benjamin, but more exalted and penetrating, because of its attenuation. At half an hours end, take off your Coffin, and with a Feather scrape off all the Flowers, which presently shut up in a Glass Bottle well stopt with Cork, there will remain in the Crucible nothing but oily black *Fæces*.

Obs. 1. That we apply the said earthen Coffin to the brim of the Furnace, and not to the brim of the Crucible, lest the heat striking the outside of the Coffin, should make the Flowers, once sublim'd, melt and resolve into their first nature.

Obs. 2. That we use here an earthen Coffin, and not a Paper one, as most Chymists do; because, with an earthen one, of the mentioned breadth,

breadth, we gather a greater quantity of flowers; besides, an earthen Coffin may alwaies serve, whereas you must change your Paper one, and in that interval you lose many vapours that might have been converted into flowers.

Obs. 3. That the flowers of *Benjamin* are *Benjamin* its self melted in a Crucible, then elevated in dry vapours under the form of a white snowy powder, as the flowers of Sal Armoniac; for *Benjamin* is a Rosinous Gumm very dry, and totally volatil, and from thence proceeds, that as soon as it is hot, it rises in vapours, which being dry, are converted, into a very white flower or Snow. In this Operation *Benjamin* loses its red colour, and acquires a very white one, because that of what colour soever the body that is converted into flowers be, the flowers still must be white; because, it is their volatil Salt, which predominates over them, and which by consequent must invest them with that colour which is natural to all, and particularly to volatil Salts. The red colour of *Benjamin* consists in a little grosse heavie Sulphur, which cannot be raised, but by the violence of the fire which is not needfull in the sublimation of the flowers, but only in the distillation of the Oyl of *Benjamin.*

Their Use and Vertues: These flowers are most excellent to ripen old coughs, and to help out flegmes, because, that they are all Volatil, and Balsamick Salt.

The Flowers of Antimony.

POwder one pound of Crude Antimony, or rather of Regulus; put it to an Earthen Cucurbit unglazed; place it upon the two Iron Barrs that are in the great Reverberatory Furnace, so that the neck of the Cucurbit be four fingers higher, than the top of the Furnace, Lute your Vessel round about to the Furnace, and fit to this Cucurbit an earthen pot turn'd upside down, so that the brim of your Cucurbit, enter within the said pot a little: This Pot must have in its bottom an hole as big as an Egg. Lute well the conjunction of these two Vessels, and to the uppermost of them fit another Pot a little less, having also a hole in its bottom, and then put upon this another, yet less, and having a hole of the same bigness, and so fit, as that its brim must go into the brim of the inferiour pot, then fit to this another less still, and having a hole also, and at last fit another and fifth pot, having a hole of the bigness of your little finger, and having its brim inserted into the brim of the pot under it. They must be thus less, and less, by degrees, as the Pyramide grows higher, and have a care that you lute well all the conjunctions of these several pots. Give at first a violent fire, and continue it to the highest degree for fourty eight hours, and all the while keep the little uppermost hole well stopt with some of our Lute; your Antimony will be melted in

your

your Cucurbit, and then it will rise, and be sublim'd in dry vapours, which will stick to the sides of the said pots, in the form of flowers, as white as snow. In the first Pot they are yellow, in the second red, and in the third white, your Operation, having lasted out the time prescribed, put out your fire, & as soon as your pots are cold, unlute them neatly, and with a feather scrape away all the said flowers, putting white to white, red to red, and yellow to yellow.

Obs. 1. That for this Operation the Regulus of Antimony, is fitter than Crude Antimony, because, that the Regulus being already separated from its *Fæces*, is all sublimed, and so makes a greater quantity of Flowers, both better and purer: for crude Antimony contains four times as much *Fæces*, as it does Regulus, which is the purest part of the Antimony.

Obs. 2. That the Flowers of Antimony are of three colours; the white do contain nothing of the venemous Sulphur of Antimony, and are therefore coloured, of the colour of the Volatil Salt of Antimony: the yellow do contain a little of the said Sulphur, and are therefore somewhat tinged; but the red do abound with the said Sulphur, and are therefore highly dyed.

Obs. 3. That we fit divers pots one upon another, to receive all these flowers, of different colours; the white in the first, the yellow in the second, and the red in the last: we leave a hole in the uppermost pot, to give the vapours a little aire, but it is not so big as in the lowermost

pots,

pots, least the finest flower should be lost through so wide a hole.

Obs. 4. That we give at first a great fire, and continue it fourty eight hours, to keep alwaies the Regule or Antimony infusion and effumation, else it would yeild no flowers.

Obs. 5. That you must not use stone pots; for the violence of the fire would break them: nor Earthen glazed pots of potters earth, because that the glazing would melt and fix the Antimony; but you must use strong pots of potters earth unglazed.

Obs. 6. That the Flowers of Antimony are nothing but the Regulus of Antimony, or the purest part of the Antimony made Volatil, and sublimed into dry vapours, by the strength of the fire, and so converted into a fine impalable powder, called Flowers. The white containe only a part of the body of the Regulus, and a good deal of the Volatil Salt of Antimony; the yellow contain a part of the body of the Regulus, and little of the Volatil Salt; and so do the red, with a good deal of the malignant Sulphur of Antimony.

Its Use and Vertues: The white Flowers provoke sweat, & sometimes vomiting, and are very good against pestilential Feavers; the yellow do provoke vomiting with violence, and the red much more, and with convulsions; therefore there is no use of them, only they enter in the composition of the Plaster of *Paracelsus*, or of some others, as you shall find in Authors: the dose is, from three to seven grains.

The

The Flowers of Brimſtone.

Put a great Earthen glazed Cucurbit into a ſmall Reverberatory Furnace; ſo that between it, & the Furnace ſides, there be the thickneſs of a Crown piece left empty, and the body of your Cucurbit muſt not be above half ſunck into the Laboratory. Then ſtop with Lute all the upper circumference left empty, betwixt the Furnace and your Veſſel, leaving only three little holes equally diſtant from one another, to give the fire vent. Then line the neck of your Cucurbit without, with ſlices of Paper, covered with ſtarch, as if it were to fit a head to it; and in ſtead of a head, fit an Earthen glazed pan; not turn'd upſide down, but having a hole in its bottom, of ſuch a capacity as to receive the neck of the Cucurbit. Lute them well together with ſlices of Paper, ſtarched both above and under the junction of the Pan with the neck of the Cucurbit; fill this Cucurbit; with yellow Brimſtone in powder till, it be half full, and then fit to this earthen pan another of the ſame metal, which muſt be whole, and turned up-ſide down upon the firſt, ſo as its bottom be half a foot diſtant from the neck of the Cucurbit, there muſt be in the bottom of this ſecond Pan, a little vent hole, of the bigneſs of the point of a bodkin, to give aire to the vapours of your Brimſtone, which elſe would make your Pan fly about your

ears:

ears: give your fire by degrees, and continue a pretty good fire, till there come no more fumes out of the little hole, which for a pound of Brimstone will happen in three quarters of an hours time. Then put out your fire, and let your Vessels cool; when they are cold, separate them one from the other, they will be lin'd with a thick crust yellow and light, and which being bruised between your fingers, is easily reduced to an impalpable powder; scrape off this crust with a knife, and you have the Flowers of Brimstone, out of each pound you will have twelve ounces of flowers by this method.

Obs. 1. That we use here yellow Brimstone, that is in great rowls: because, that it is the purest and best, separated from its Mineral earth, and therefore will yield more, and fairer flowers; the green, or gray Brimstone, show by their colour that they are not so pure, and by consequent not so fit for this Operation.

Obs. 2. That we use here a glazed Pan, as well because that Brimstone has not force enough to corrode the glazing, as because that being glazed, the pans are smoother, and so it is easier to scrape off your flowers: a stone Cucurbit would break, and you would hardly scrape off all your flowers in a stone pan, whose surface is un-even.

Obs. 3. That a great Reverberatory fire is not necessary in this Operation, because that the Brimstone is easily melted, and when melted, is easily raised in flowers.

Obs. 4. That the Flowers of Brimston are nothing

nothing but Brimstone purified from its *Fæces*, and sublim'd in dry vapours, by the means of the fire which has melted it, then converted into impalpable yellow flowers in the sublimatory Vessels.

Its Use and Vertues: These Flowers have the same, but a more exalted Vertue than ordinary Brimston, because of the Thinnesse and Tenuity of their substance; interiourly they are used for the same end, as the Magistery or Milk of Brimstone, and exteriourly they are used in unguents for the Itch and Scab, and for the Farcy in Horses, incorporating it with Oyl of Olives and fresh butter. But you must be carefull to use first general remedies, for brimston is so drying, that it presently dries up, not only the Itch and Scab, but also so parches the skin, as to make it incapable of receiving the impurities of the body, and of being transpirable; from which are caused many violent diseases, if the said impurities be not emptied by general remedies, both before and after the use of Brimstone.

The Rosin or Magistery of Jalap.

TAke as much Jalap as you please, well cleansed from its ordures, and dryed in the Sun, then powdered and put into a Matrass. Pour upon it good Spirit of Wine, four or five fingers

fingers above your Matter, and let your Matrass have a third part empty: fit to it another Matrass to make a double vessel, place it in a sand fire, and there let it stand twelve houres, in which time your spirit will acquire a Tincture as red as Claret Wine: poure off that, and pour on more spirit to the *Fæces*, in twelve hours it will have extracted a new Tincture, which pour off also. If you will, you may pour on more Spirit, but if your second Tincture be not high colour'd, it will not be worth your pains, and cost to pour on more Spirit of Wine: gather together your Tinctures to draw out of them and precipitate either the Rosin or the Magistery. If you will be content to lose your dissolvant, and so convert all your Tinctures into Rosin, pour them into a great glass bell, full of cold water, and presently your Tincture will precipitate to the bottom, in the consistence of a white Rosin, separate all the liquor that swims above it, and loosen and take away your Rosin, which did begin to stick to the bottom of the Vessel; put it into a glass, either whole or in pieces, which being cold, will grow as hard as Rosin or Colophone.

If you wil draw off your dissolvant, and change your Tinctures into a Magistery, put them all into a glass Cucurbit, of such a proportion, as not to be above half full with them; place it in a *Balneum Mariæ*, and fit to it a head Give the fire by degrees, and draw off by distillation about half the Spirit of Wine to use in other such uses, then pour the remainder, while it is warm, into a glass Bell, full of cold water; and presently

ntly the Tincture of your diſſolvant will be pre-
pitated, not into a Roſin, but into a white
urd, which by little and little, in half a quar-
r of an hours time, will be converted into a
hite Roſinous powder. Separate by inclina-
on the water, and pour two or three times cold
ater upon this powder, to ſeparate it well
om its diſſolvant; then filter the remainder
rough a Coffin of white Paper, and dry it in
e ſhade, keep this powder or Magiſtery in a
ol well ſtopt,

Obſ. 1. That we take Jalap very well cleanſed
om its ordures, that we may have a fairer
oſin, and more of it, and that it is firſt dri'd in
e Sun, to the end that its watriſh humidity
ing gone, it my not dull the action of the diſſol-
nt, and ſo it will be able to extract eaſilier
e Reſinous Tincture of Jalap.

Obſ. 2. That common cold water precipitates
u Tincture, into a Roſin, or a Roſinous pow-
r, becauſe that weakening the Spirit of
ine by its quantity, it makes it loſe its
ld, and ſo let fall to the bottom that
bſtance which it had ſeized upon in the diſſolv-
g it.

Obſ. 3. That the precipitate of Jalap is more
operly called a Roſin, than a Gumm; be-
uſe it would diſſolve better in oily liquors,
Roſins do, than in wateriſh liquors as
ums do.

Obſ. 4. That when your Tincture is thrown
o cold water, before it be evaporated half a-
y, it then precipitates in conſiſtence of a
Roſin,

Roſin, but when it is evaporated half away, then it is precepitated in conſiſtence of a Curd, which comes to a Powder.

Obſ. 5. That the Roſin or Magiſtery of Jalap, is nothing but the Roſinons part of Jalap ſeparated from all the terreſtrial part which remains in the Matraſs, and from its volatil Salt, which has been diſſolved in the Diſſolvant, or in the Precipitant.

Its Uſe and Vertue: It purges by ſtools without procuring Vomit; it has a gentler way of operating, than pure Jalap taken in ſubſtance; becauſe it is deveſted of its Volatil Salt, which is its ſharpeſt part. The Doſe is, from ſix to twelve grains, or thereabouts, in form of Pills, or *Bolus*, with ſome Conſerve, or ſome ſuch thing.

The Roſin, or Magiſtery of Scammony.

TAke good clean Scammony, & powder it, then faſten a leaf upon a little woodden Square, or Frame, upon the Paper ſpread your powder, place it over the vapour of Brimſtone, which you muſt throw from time to time into a chafing-diſh full of Coals, and in the mean time, ſtir continually your powder with a woodden *Spatula*, and do not approach it too near the Fire, leſt it ſhould melt, and ſo become a lump, as before;

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for, if ſuch a thing ſhould happen, you would not be able to make the flegm, and the volatil, and ſulphureous malignant ſalts of the Scammony to evaporate, which is the thing you aim at. Your Scammony being thus prepared, you ſhall extract out of it a Tincture, as red as bloud, in a glaſs double-Matraſs, with Spirit of Wine; of which Tincture make the Roſin or Magiſtery, in the ſame way that you make the Roſin or Magiſtery of Jalap.

Its Uſe and Vertues: The Roſin of Scammony, purges gentlier than Scammony in ſubſtance, becauſe it is deveſted of a great deal of its ſulphureous volatil Salt, by the burning vapour of the Brimſtone. The Spirit of Wine, and common Water have ſet at liberty, and diſſolved the reſt of the volatil Salt, and the terreſtrial part, or *Fæces*, remain in a ſmall quantity in your Matraſs. The Doſe is from ten to twenty grains.

The Cremor Tartari.

TAke four pound of white Tartar of *Montpellier*, in great lumps; waſh them well in common cold Water, and then dry them upon boards in the Sun; this done, beat them in a braſs Mortar, and ſearce them to a very fine powder. In the mean time, let there be a pale of Water boyling in a Braſs, or Copper Kettle, and into it throw your Tartar by ſpoonfuls, and ſo let it boyl for two hours, ſtirring it continually

with a woodden *Spatula*; then take off your Kettle from the fire, and filter your Dissolution while it is warm, through divers Coffins of brown Paper; evaporate your filtrations in earthen glaz'd Pans, over a naked fire, till by their boyling, there appear a kind of a skin upon the surface of the said Decoction: then take off your Pans, place them in your Cellar, and in three or four days there will be congealed to the bottom and sides of your Pans, great quantity of Crystals as white as Snow, and of a triangular and square Figure. Pour out the Water that remains in your Pans, if it look durty, keep it, and boyl it again to a consistence of a skin, then congeal it in your Cellar, and so draw out all the Crystals left in it; dry your Crystals, either in the Sun, or in a dry place; then gather them, and put them into glass Vials well stopp'd: and thus you have that which Chymists call *Cremor Tartari*, or Crystal of Tartar. Out of one pound of Tartar, you have four ounces of Crystals, and twelve of *Fæces*.

Obs. 1. That for this Operation, we chuse Tartar of *Montpellier*, because, it is much salter than the Tartar of any other part of *France*; because, that at *Montpellier* they use great Hogsheads, or rather Tuns, that serve twenty or thirty years, so that there gather to the sides of them, a Tartar three or four fingers thick, and by consequent very saltish: besides that, the strength of the Wine of those parts, makes their Tartar better; and at last we chuse white Tartar, because it contains more Salt than the red.

Obs. 2. That we wash well the lumps of Tartar,

tar, before we powder them, to the end, we may cleanſe them from a kind of terreſtrial dreggs, which remain upon the ſaid Tartar, in form of a powder: by waſhing, part of this powder goes to the bottom, and part of it makes the Water look muddy.

Obſ. 3. That we powder and ſearce it, that we may extract eaſilier, and more abundantly, the ſaid Cryſtal of Tartar.

Obſ. 4. That we boyl it in a great quantity of Water, and that a good while, that we may extract all its ſaltiſh ſubſtance.

Obſ. 5. That it is thrown in by ſpoonfuls, and not altogether, that ſo the diſſolution of its Salt be the better performed, and ſooner; and for the ſame reaſon the Water is not cold, but boyling hot.

Obſ. 6. That we ſtir it continually with a *Spatula*, elſe it would remain in the bottom of the Kettle, in a lump, and ſo being touched by the Water, but on one ſide, it would not ſo eaſily diſſolve. Now your *Spatula* muſt be of Wood, and not of Iron, leſt the blackneſs of the Iron, by the acidity of the Tartar, come off, and ſpoil the beauty of your Cryſtals.

Obſ. 7. That we boyl our Tartar with Water, in Braſs or Copper Kettles, and in earthen Pans, becauſe that the Salt of Tartar is not ſharp enough to corrode Braſs, Copper, or the glazing of Lead; and therefore, there is no danger it ſhould be loaden, or impregnated with their ſubſtance, and particularly, if it be uncalcin'd Tartar, and diſſolved in Water.

Obſ. 8. That your Tartar having ſufficiently boyl'd in Water, and the Water being impregnated with all its Salt, we filter this diſſolution through a brown Paper-coffin, that ſo we may ſeparate all the terreſtrial indiſſolvable part of it, which will remain in the Coffin of brown Paper; this filtration is performed while the Diſſolution is warm, that ſo the Salt may paſs with it, which would go to the bottom, in form of a white powder, if the Diſſolution were cold.

Obſ. 9. That to cryſtallize the Salt of Tartar uncalcin'd, and diſſolv'd in Water, you muſt evaporate above half of your Water, till your Salt begin to coagulate; which you obſerve, by that little skin, that gathers upon the ſurface of your Water; then by taking off your Veſſels, and placing them in a cold place, as the Cellar, the Salt is formed into Cryſtals, and is freed from the Water, which kept it in diſſolution. If you had continued your evaporation, till your matter had been dry, there would have remained in the bottom of your Veſſel, a white Salt in powder, but it is much more pleaſant, to have it in the form of Cryſtals.

Obſ. 10. That the Cryſtal of Tartar, or *Cremor Tartari*, is nothing but Tartar ſcoured, and whitened by Lotion, pulveriſation, boyling in the Water, filtration, evaporation, and coagulation, or cryſtallization made in the Cellar. It is compoſed of two ſubſtances; one is ſaltiſh, the other is terreſtrial: The firſt, diſſolves in any Water; the ſecond, only in warm Water: and as ſoon as the Water is cold, the Cryſtal frees its

ſelf

ſelf from it, and coagulates in the bottom, in form of a white powder, if there be a good deal of Water; but, if there be but a ſmall quantity of Water, it coagulates into white Cryſtals, ſticking to the ſides of the Veſſel.

Its Uſe and Vertues: It is a great Aperitive, Deſopilative, and Diuretick. It purges gently ſometimes, but its principal effect is alwayes by way of Urine. The Doſe is, from half a dragm, to two, taken inwardly in broth: It is often mingled with Opiates, and alſo with purgative Potions; but, then you muſt ſwallow them more than luke-warm, elſe it would coagulate, and remain in the bottom of the Cup, or Glaſs: ſome alſo do diſſolve of it in Clyſters, to the weight of two dragms, or half an ounce.

The Cremor Tartari Calybeatus, *or the Steell'd Cryſtal of Tartar.*

TAke four pound of white Tartar of *Montpellier*, waſh'd, dry'd, powder'd, and ſearc'd, as has been ſaid in the precedent Chapter. Mingle with it two ounces of the *Crocus*, or Saffron Aperitive of *Mars*, or Iron; throw this mixtion by ſpoonfuls into a Kettle full of boyling Water, ſtir it continually with a woodden *Spatula*, and boyl your Water half a way; then take off your Kettle, filtrate the reſt while it is warm, put your Filtration into earthen Pans unglazed,

and evaporate it in a gentle fire, to the *Pellicule*, as you do in the Salt of *Saturn*; then set it in a Cellar to congeal, and in three or four days, there will strike to the bottom, and sides of your Pans, a good many clear Crystals of a fine green colour, round in figure, and a little sharp; separate by inclination the remainder of the Liquor of the Pans, and evaporate it again, and set it to crystallize, as the first; set your Crystals in the Sun, by placing your Pans on one side, that all the Liquor may run from them; when your Crystals are very dry, loosen them with the point of a Knife, and put them into Vials to keep: let them be well stopp'd; for, if the air come at them, they will dissolve again, or at least grow wet, and lose their colour.

Obs. 1. That you must take the *Crocus Martis aperitivus*, or opening, and not the astringent; because, that the Astringent is devested of its Salt. Now here we pretend to the proper Salt of *Mars*, and to mingle it with the Salt of Tartar. By this Mixtion the Crystal of Tartar acquires the green colour of the vitriolick Salt of *Mars*, and the faculty of dissolving in cold Water. If instead of the Saffron of *Mars*, you had added the Salt of Tartar calcin'd, you would have made Crystals of white Tartar dissolvable in cold Water; for, either of those two Salts of *Mars*, or calcin'd Tartar, would prove a Corrective to the terrestrial and indissolvable substance of the *Cremor Tartari*.

Obs. 2. That we evaporate the Dissolution of these two Salts by a gentle fire, that we may keep in their volatil Salts, which by their mixtion,

do

do whet and attenuate one another, and so are disposed to fly away; which, if they did, then your Crystals would not so easily crystallize.

Obs. 3. That the Steell'd *Cremor Tartari*, is nothing but the *Cremor Tartari* incorporated with the vitriolick Salt of *Mars*, by their dissolution in Water, the evaporation to a *Pellicule*, or skin, and the crystallization in a cold Cellar.

Its Use and Vertues: 'Tis a more powerful opener and desopilative, than the *Cremor Tartari:* It is most excellent against the Yellow Jaundice, the Green Sickness, and to provoke the Monthly Courses, if stopped. The Dose is, from half a dragm to a dragm, in some Broth, or appropriated Water.

The Virginal Milk of Benjamin, and Storax.

TAke of Benjamin and Storax, of each two ounces, reduce them to a fine powder, and put them into a Matrass, pour on Spirit of Wine, so as the matter be covered four or five fingers deep, with the said Spirit; let your Vessel stand in a cool place, for two or three days; in this time the Gums will be dissolv'd, and will colour the Dissolvant with a red transparent colour, like a Ruby, and withal, will communicate to the Dissolvant their smell most perfectly: pour off this Tincture, and keep it in a glass Vial for your use: when you intend to make of it

Virginal Milk, put about a spoonful of this Tincture into a precipitatory Vessel, as a glass Bell, &c. and pour on it, about a pint of cold Water, your Tincture and Water will be both as white as Snow, and your Tincture will be incorporated with the Water, without precipitating to the bottom.

Obs. 1. That the Benjamin and Storax, containing but very little of terrestrial impurities, do dissolve almost totally in Spirit of Wine, which by the thinness, penetration, and evenness of its substance, dissolves easily, and without heat, the said Rosins.

Obs. 2. That the red Tincture is turn'd as white as Milk, when it is dissolv'd in three or four times its quantity of Water; because, that the common Water does force the Spirit of Wine, which was impregnated with these Bodies, to let go its hold, and so it does to all Dissolvants.

Its Use and Vertues: This Virginal Milk serves to refresh and whiten the skin; it is excellent against all redness, inflammation, and Eresypela's.

The Precipitate, or Magiſtery of Silver, or Luna.

TAke one ounce of the pureſt Silver, beaten into Plates as thin as Paper; then cut it into little bits, and put it into a Matraſs with a long neck, pour upon it three ounces of *Aqua fortis*, made with Niter and Alom; and ſo let your Silver diſſolve in it, without heat; pour out your Diſſolution into a glaſs Bell, and pour upon it a quart of Sea-Water, the Silver will preſently turn into white Curds; which, in a ſmall time, by little and little, will precipitate into a powder, as white as Snow, and as ſhining as pieces of Diamonds; ſeparate by inclination your Sea-water, impregnated with the *Aqua fortis*, and pour on more cold common Water, ſo often, till at laſt it come away without any ſaltiſh taſte, which is a ſign that your powder is dulcorated; filter the remainder through a Coffin of white Paper, and let it dry in the ſhade; you will have a Calx Precipitate, or Magiſtery of *Luna*, moſt admirably fair, and white, and glittering; put it into a glaſs Bottle well ſtopp'd, and keep it for your uſe.

Obſ. 1. That you muſt take the fineſt, pureſt Silver; for, if there were the leaſt mixtion of *Venus*, or Copper in it, the Magiſtery, in ſtead of being white, would be green, like Vitriol.

Obſ. 2. That you muſt take *Aqua fortis*, made on purpoſe with pure Niter, and Alom; for, the Spirit

Spirit of Niter alone, would be too ſharp, and your Magiſtery would hardly be ſweetened from all Acrimony, which might, if there remain'd any, corrode and ſpoil the face it is laid upon. As for common *Aqua fortis*, made with Niter and Vitriol, it would be worſe; not only, becauſe it is ſharper than Spirit of Niter, but alſo, becauſe of its having Vitriol amongſt it, which would make your Magiſtery black. Alom is much fitter to be added to Niter, becauſe it has little Acrimony, and great quantity of Flegm; inſomuch, that Alom is nothing but a part of Virginal ſaltiſh Earth, and a great deal of Water congealed, and cryſtallized together.

Obſ. 3. That Sea-Water precipitates the Calx of Silver, for the Reaſons which we have ſaid in the Chapter of the Magiſtery of *Biſmuth*.

Obſ. 4. That the Magiſtery of Silver, or the Moon, is nothing but a Philoſophical calcination of Silver, by the means of *Aqua fortis*, precipitated by Sea-Water, and ſweetened by frequent Lotions.

Its Uſe and Vertues: It is the beſt of all Fucuſes, according to the eſteem and opinion of Ladies; becauſe of the choice of the matter, and of the Diſſolvant; and alſo, becauſe it is dearer than the others: the great price of things, ſerving often to create an eſteem for them.

The

The Tincture of Gold, or Aurum Potabile.

TAke a hollow branch of Crystal, as thick as your finger, and two or three foot long, thrust it half way into warm Ashes, to heat a little, and so dispose it, to endure a greater heat, without flying; then present it, by little and little, to the fire of a reverberatory Furnace, then put it quite into the Furnace, and hold it in the middle of the flame, to make it grow red and soft; there must be over against the Fire-room-door, a hole, by which another must put in the end of a little Crystal Twig, made as small as a thread, which he must heat likewise, and soften, and when it is soft, he must fasten it to the end of the great branch, which you hold; then let him draw this Rod, or Twig to himself, and the branch will follow, and stretch like Paste, and you may make as many Rods, and as small as you please of it.

Having made divers little Rods of Crystal by this method, you must guild them one after another with Ducket Gold in Leaves; buy therefore a Book, containing six and twenty Leaves of Ducket Gold, take one of these Leaves, and spread it upon a Cushion made of Calves Leather, and with a sharp Knife, cut it into little slices, of half a fingers breadth, then wet with spittle one end of your Crystal Rods, and apply it to one of these slices, turning it upon the Cushion

Cuſhion, to make the Gold ſtick; then continue wetting it a little higher, and apply it to another ſlice of Gold, and do ſo till you have guilded all your Cryſtal Rods, one after another, uſing a little white Cotton, to preſs your Gold, and make it ſtick. This done, put them to dry in an Oven, after the Bread is taken out; when they are dry, apply another lay of Gold to them, and then dry them; do thus ſeven times, ſo that each Cryſtal Rod be covered with ſeven layes of Gold.

Then powder groſly all of them guilded and dried, and put them into a Crucible, which ſet in a Wind-Furnace, give a great fire, and continue, it till your matter be melted; then take it out, and powder it, it will look yellow: let your powder be very fine.

Put this powder into a long-necked Matraſs, and put to it a dragm of the Salt, called the *Salt Anatron*, or the Salt of Glaſs; it is the fix'd Salt which ſticks to the bottom of the Kettles, where Salt-peter is boyled: if you can come by none of this *Salt Anatron*, put in common Sea-Salt decrepitated, and pour upon it alſo Spirit of Salt, well rectified, and deveſted of its flegm, four or five fingers above the matter: this Spirit being whet and ſharpened by the addition of the *Salt Anatron*, or common Salt, will corrode and diſſolve the ſaid Gold, in three or four hours, without fire, and in this action will loſe its force; ſo that it will have no Acrimony left, but only a pleaſant acidity, and it will be impregnated with the Tincture of Gold; in the mean time, it will not

not operate at all upon the Cryſtal, which will remain in the bottom of your Veſſel, in its own ſubſtance, fit for other uſes, as we ſhall teach hereafter. When you ſee your Spirit well tinged with the colour of Gold, then pour it off, and put to your matter the like quantity of the *Salt Anatron*, or of Sea-Salt decrepitated, in its place, and as much rectified Spirit of Salt, to draw off another Tincture; and do ſo as long as your Spirit does draw any Tincture, and till it come away as ſharp as it went in. Put your Tinctures together, they will make a Potable Gold, as yellow as a Topaz, and of no taſte. If you put them into a ſmall glaſs Body, with a Head of the ſame, in a Lamp-fire, and draw off by Diſtillation half your Diſſolvant, there will remain a Tincture of Gold, more lively, and acid, and alſo potable.

Obſ. 1. That we uſe Cryſtal as an *intermedium*, for Gold, which without any *intermedium*, could not be calcin'd, but would melt: and if it be not calcin'd, then it will not diſſolve in ſo gentle a Diſſolvant, as Spirit of Salt. Now there is no *intermedium* better than Cryſtal, for all other Mettals would melt, and mingle with Gold; Minerals, beſides their metallick qualities, would alſo impart to the Gold the Corroſion, and Acrimony of their Salts: but, Cryſtal containing but a very little Salt, and a great deal of Earth, it does not mingle, nor communicate to the Gold any Acrimony, and yet by the drineſs of its ſubſtance, it hinders the melting of Gold, and ſo furthers its calcination.

Obſ. 2.

Obs. 2. That the Gold and Crystal being calcin'd, are powder'd; because, that so the Gold is easier to be dissolved by so gentle a Dissolvant, as Spirit of Salt.

Obs. 3. That we use Spirit of Salt to dissolve Gold, already calcin'd; because, that though there be more powerful Dissolvants, (as *Aqua fortis* made with fine Niter, and deflegmated Vitriol, or Colcothar; as also, *Aqua regalis*, which is made with Niter, Vitriol, and Salt Armoniack) yet these Dissolvants are too corrosive, before and after the dissolution of the Gold to be potable, and the Spirits of Vitriol, or Sulphur are not sharp enough; so that the Spirit of Salt alone, has force enough to dissolve Gold, and make it potable after its dissolution; and yet this Spirit must be rectified too, and whet and sharpened by the addition of *Salt Anatron*, or common Salt decrepitated.

Obs. 4. That the Crystal which remains in the Matrass, after the dissolution, must be well dulcorated, or sweetened, and then may serve for a Dentrifice, or cleanse Teeth, by wetting a corner of a Towel in common Water, and then putting it into the said powder, and with it rub your Teeth: or, it may serve to make the Salt of Crystal, as we have said already.

Obs. 5. That the Gold is potable, but as long as it remains dissolved in the said Spirit of Salt, and that you must not mingle it with any Liquor whatsoever; for, if you do, it will precipitate your Gold into a yellow powder, and so you will lose your Tincture.

Obs. 6.

Obs. 6. That potable Gold, is nothing but Leaves of Gold calcin'd with Crystal, and dissolved in rectified Spirit of Salt.

Its Use and Vertues: It cannot be doubted, but that this Potable Gold has the vertues of Spirit of Salt, that is, it is excellent against pestilential and putrid Feavers, to purifie the Blood, drive out Gravel, whiten the Teeth; and also, it may be said to have the vertue of the Water of Pearls, and being thus prepared, consumes all sharp humors in the Body, as Pearls thus prepared do: so that it is not without reason, that this Remedy is esteemed as good against Cancres and venemous Ulcers, and pestilential Feavers. The Dose is, six or eight drops in some Broth, or appropriated Water: and for the Teeth, you may put a spoonful of it in two spoonfuls of Rose-Water, or Flower of Orange, or Jasmin. It has likewise the vertue of preserving your Wine in your Cellar for many years, by putting about half a pound of this Potable Gold into a Hogshead of Wine; but except it be very rare Wine indeed, and that you desire to have it of many years, it would cost you more than it would be worth.

The Salt of Vitriol, or the Crystals of Venus.

TAke Verdigreece, or Spanish Green, as much as you please, powder it in a Brass Mortar, and stop your Nose close, lest the venemous

venemous vapours should poyson you; put it into an ample Matrass, with a long neck, so that it be three quarters empty; pour upon it good distilled Vinegar, so that your Matrass be almost quite full, place it in a Sand-fire, and by fitting to it another Matrass, make a double Vessel of it, in twelve hours time you will have a blew Tincture, like true Turquoises; pour off this Tincture into a stone Pan; pour on more distilled Vinegar upon the *Fæces*, to extract a new Tincture; and do this till there remain nothing but brown *Fæces* in the bottom of your Matrass: then take a glass Cucurbite, and apply to the bottom of it a leaden, or iron Ring, tied to it by four pack-threads, which are fastened to a pack-thread tied about the body of the Cucurbite; put all your Tinctures into this Cucurbite, which set in a Kettle full of Water, where it cannot swim, nor lean more on one side than the other, because of the weight it has at the bottom; draw off the distilled Vinegar, till you see that there is a thin skin begun to be formed upon your Tincture; then take out your Cucurbite, and set it in a cool place, as a Cellar: in three or four days there will be in the bottom, and upon the sides of your Vessel, divers Crystals of a lovely blew-like Turquoises.

This done, pour off by inclination, all the Water that is not congealed, and evaporate it in a Cucurbite, in a *Balneum Mariæ*, as has been said already; reiterating the evaporation, and crystallization of the said Water or Tincture, till there remain very little of it.

Then

Then put together all your Cryſtals into another Matraſs, pour upon them diſtilled Vinegar, enough to diſſolve them; you may make uſe of that Vinegar, which you drew off from your firſt Tincture; place your Matraſs in a Sand-fire, and make a double Veſſel of it; in three or four hours time, the diſſolution of your Cryſtals being done, filter it while it is warm, through a brown Paper, and receive your filtration in a ſtone Pan; there will congeal in this Pan, great quantities of Cryſtals, which will change their blew colour, into a green one, like Emeralds, and half tranſparent. Pour off by inclination, the Water that ſhall not congeal; then ſet your Cryſtals in the Sun, to dry them well, and when they are well dryed, take them out of the Pan, and put them into a glaſs Vial, well ſtopp'd, to keep for your uſe.

Obſ. 1. That to extract the Salt of *Venus* or Copper, we uſe Verdigreece; becauſe, that Verdigreece is nothing but *Venus* diſſolv'd, extracted, and calcin'd Philoſophically by the acid Spirit of Wine: Now, it is impoſſible to extract the Salt of any Body, before it be calcin'd; and as for Metals, they cannot be calcin'd otherwiſe, than Philoſophically, that is, by the corroſion of ſome acid Spirits; for fire, though never ſo violent, can but melt them, and evaporate ſome part of them.

Obſ. 2. That we uſe here diſtilled Vinegar, to diſſolve Verdigreece, and extract its Tincture and Salt; becauſe, it contains but little of a tartareous Salt, or Salt of Tartar, which being joyned with

the Salt of *Venus* cannot hurt; but *Aqua fortis*, *Aqua regalis*, the Spirit of Niter, Brimstone, or Vitriol, contain a great deal of corrosive Salt, which would alter the Salt of *Venus*, and make it corrosive, being joyned with it; for, it cannot crystallize without them.

Obs. 3. That you must use here glass and stone Vessels, and not of vernish'd, or glaz'd Potters Earth; because, that the sharpness of the Verdigreece would corrode the glazing, and impregnating its self with Lead, would spoyl the brightness of your Crystals; and if your Vessel were unglazed, then the Verdigreece having, by its dissolution in distill'd Vinegar, acquired a singular sharpness, and penetration, would insinuate, and lose its self in the pores of the Vessel.

Obs. 4. That we distil, and evaporate the Tincture of Verdigreece, in a gentle heat of *Balneum Mariæ*; lest in a greater heat, the sulphureous part, and volatil Salt of *Venus* should exhale, and be gone, since it is in that sulphureous part, that consists the greatest vertue of this Remedy, and it is it, that contributes most to the crystallization.

Obs. 5. That the Crystals of *Venus* change their blew dark colour, into a green transparent one, by the means of reiterated dissolutions, and crystallizations; which Operations, do purifie these Crystals from their blew terrestreity; and that the true colour of the purified Salt of *Venus*, is to be as green as an Emerald.

Obs. 6. That the Crystals of *Venus* are nothing else, but the Salt of *Venus* extracted from the

Calx

Calx of *Venus*, which is Verdigreece, by a gentle Diſſolvant, which is diſtilled Vinegar: then after evaporation of half of the Diſſolvant, cryſtallized in a cool place.

Its Uſe and Vertues: It is a powerful Diuretick, and Deſiccative, and therefore moſt excellent againſt Gonorrhæa's. Its Doſis is, from three to ſix grains, in a Pill of Turpentine, that has been boyld to a conſiſtence of *Colophone*, continuing to take of it three days together. There may be alſo drawn out of it a Spirit, fit to precipitate all ſorts of Diſſolutions.

The Cryſtals, or Salt, or Vitriol of Mars.

TAke five or ſix pound of the opening Saffron of *Mars*, called commonly, *Crocus Martis aperitivus*, as it has been deſcribed in this Book; powder it in a Mortar, and ſearce it through a ſilken Sieve, then throw it by ſpoonfuls into a Kettle of ten or twelve quarts of boyling Water, ſtirring it continually for two hours together, with a Ladle, or *Spatula* of Iron, till the Water be half boyled away; then take off your Kettle, and filtrate your Liquor while it is warm, through a brown Paper; evaporate your filtration in a Sand-fire, to the *Pellicule*, in ſtone or glaſs Veſſels, and afterwards ſet them in the Cellar; in two days there will be a good many green tranſparent Cryſtals, ſticking to the ſides

and bottom of your Pans. Pour off by inclination the Water that is not congealed, and evaporate it again, and cryſtallize it: then gather all your Cryſtals together, and put them into a glaſs Vial well ſtopp'd. As for the powder of *Mars* deveſted of its Salt, which will remain in your Coffins of brown Paper after filtration, dry it, and keep it to make the Aſtringent, or binding Saffron of *Mars*.

Obſ. 1. That to extract the Salt of *Mars*, we take the opening Saffron of *Mars*; becauſe it is nothing but *Mars* calcin'd, by the means of Brimſton, and a reverberatory fire. Now, it is not poſſible to have the Salt of *Mars*, if it have not been firſt calcin'd: and it cannot be calcin'd by fire alone, which would only melt it, as it does other Metals; you muſt therefore calcine it Philoſophically with Brimſtone, whoſe Salt and Spirit corrodes, and calcines *Mars*.

Obſ. 2. That to extract the Salt of the *Crocus Martis aperitivus*, it is enough to powder and ſearce it, and throw it into a great quantity of boyling Water, which has force enough to draw to it the Salt of the Calx of *Mars*, or *Crocus Martis aperitivus*.

Obſ. 3. That the Cryſtals of *Mars* are of a green tranſparent colour; becauſe, that *Mars* is drawn out of a vitriolick Earth, which indeed, does contain nothing but pure Vitriol, which by the violence of fire, is changed into a metallick Body, the hardeſt and blackeſt of all Metals; and being opened by the Agents and Diſſolvants of Chymiſtry, doth communicate this colour.

Obſ. 4.

*Obs.*4. That if you do not keep these Crystals in a Vial well stopp'd, as soon as the air comes to them, they will be covered with a kind of white Meal, which will spoil their transparency, and greenness; and that *Mars* being a very dry Metal, and for this reason, the hardest and less flexible of all the Metals, it easily dries, and is converted into this white mealy substance.

*Obs.*5. That these Crystals of *Mars*, are nothing but the Salt of *Mars*, extracted out of the opening Calx of *Mars*, by the sweetest of all Dissolvants, which is common Water, boyling hot, then evaporated, and crystallized.

Its Use and Vertues: It is an opener, or aperitive, much stronger than the opening Saffron of *Mars*, because it is the pure Salt of *Mars*, separated from its terrestrial indissolvable part; and is therefore excellent against the Green Sickness, the Yellow Jaundice, and to provoke the Monthly Courses. The Dose is, from a scruple to a dragm in Broth, or some Syrup: you may add to it a dragm of the Extract of Savin, to augment its vertue.

The *Astringent*, *or binding Saffron of* Mars.

TAke the powder of *Crocus Martis aperitivus*, which remains in the coffin of brown Paper; after you have filtred the Dissolution of the said *Crocus Martis aperitivus* in common

Water, which powder will be then devested of all its Salt of *Mars*: fill with it a Pot of Potters Earth unglazed, place this Pot in the Furnace of the great Reverberatory Fire, and give the Fire for eight and forty hours; then take off your Pot, and break it, and while it is hot, powder your matter in a Brass Mortar, and then set it in the air upon a Board, or upon a Marble Stone; when it is quite cold, searce it through a silk Sieve, and keep it in woodden, or glass Vessels.

Obs. 1. That though the said powder of *Mars* be devested of its Salt, yet we reverberate it a great while, that so all its Salt may evaporate, and the Remedy be the more Astringent, which is the only intention it is to answer.

Obs. 2. That we use not a glaz'd Pot, lest in the reverberation the glazing should melt by the violent heat of the Fire, and mingle with the *Mars*.

Obs. 3. That we powder the said *Mars*, while it is warm, that we may powder it easilier, and make a finer powder of it.

Obs. 4. That we searce it through a Silk Sieve, that so we may make it so impalpable, as that in passing through the Stomack, it leaves no hard gravelous substance, that might offend the Coats of the Stomack, or Intestines.

Obs. 5. That the Astringent Saffron of *Mars*, is nothing but *Mars* calcin'd Philosophically by Fire and Brimstone, devested of its Salt, by its dissolution in common Water, then reverberated.

berated, powdered, and ſearced, to be reduced to an impalpable powder.

Its Uſe and Vertues: It is a powerful Aſtringent inwardly taken; and exteriourly applied, it ſtops the Bloody Flux, the Hepatick Flux, and all Diarrhæa's. Its Doſe is, from half a dragm to two, in ſome Conſerve, or Preſerve, or Bolus: It ſtops likewiſe bleeding of the Noſe, by powdering ſome Cotton with this powder, and filling the Noſtrils with the Cotton thus powdered.

A Little

TREATISE OF CHYMISTRY:

OR,

An Abridgement of the precedent *TREATISE.*

Of the Hermetick Lute.

TAke of Potters Earth, Sand, and Horſe-dung, equal quantity of each, and knead them together with a little Water, or Whites of Eggs, to a ſoft lump: this ſerves to make Bricks in a Mould, to cement your Bricks in the ſtructure of your Furnaces, to lute your Veſſels, and to fill up the holes, chinks, and cracks of your Furnaces and Veſſels.

Of

Of Hermetick Furnaces.

A Furnace to distil, with the Vesica covered with its Refrigeratory, Waters, Aromatick Essences, and Spirit of Wine; it has an Ash-hole, a Fire-room, and a Laboratory; the Laboratory must be as high as the Vesica, and half a finger in its circumference wider than the Vesica; you must put Wood and Coals into the Fire-room.

A Furnace for a violent Reverberatory Fire, serving to draw the Spirits, and Oyls of Minerals, and Metals, in a glass or stone Retort luted, or in an iron one: it is like the precedent, only the Laboratory must be of the height of the Retort; and that there must be a gap to put the neck of the Retort out at, and must have an inch in circumference, more than the Retort; then in the Operation, you must add to it three Layes, or Rounds of Bricks, lesser still towards the top, and fill the holes with pieces of Brick or Iron: Wood and Coals are the materials of your Fire.

A Furnace for a Circulatory Fire, and of Suppression, serving to distil the Flegm, Spirit, and Oyl of Seeds, Berries, Woods, Barks, Roots, &c. in a stone or glass Retort luted: it is built like the precedent, only the Ash-hole, and Fire-room are not separated from one another, and that you must cover the top of your Furnace with an earthen Pan, that has a hole in its middle: Wood and Coals are your fuel.

A furnace for a Wheele Fire, ſerving to ſublime the Salts of Minerals and Metals, in a Matraſs of Glaſs luted: it is made of two Rounds of Bricks, without Cement or Lute, leaving a little ſpace between the Bricks. You muſt put an earthen Bowl in the middle, to ſet your Matraſs on, and kindled Coals round about it.

A Furnace for a Circulatory Fire, and of Suppreſſion, ſerving to calcine and melt Minerals, and Metals, and to calcine Vegetables and Animals in Crucibles, or great Pots of the ſame Earth: It is made of two Rounds of unluted Bricks, ſet at a little diſtance one from the other, that the air may come in; it is enough to make it two fingers above the Crucible, when ſet in its earthen Bowl: you muſt lay round about as high as the Veſſel, kindled Coals.

A Furnace for a Circulary Fire, and of Suppreſſion, ſerving to diſtil Oyls, acid Spirits, and Flegms of Gums, Roſins, Wax, in a glaſs Retort luted. It is built as the precedent, only there muſt be a place for the neck of the Retort to come out at. The ſame Materials of Wood and Coals for your Fire.

A Furnace to diſtil in a *Balneum Mariæ*, or *Mariæ*, or vaporous Bath, all ſorts of Liquors, to evaporate the Extract of Salts, and for all other Operations. It is made of divers Layes of Bricks luted together; there is in it an Aſh-hole, a Fire-room, and a Laboratory, and in the top of the Laboratory three little gaps, to give a paſſage to the Flame. You muſt put your Coals in the Fire-room, and a Kettle with a brim in your Laboratory.

A Furnace for the Fire of Ashes, or Sand, wet or dry, serving to distil and rectifie all sorts of Liquors, and for Infusion, Digestion, Tinctures, Evaporation, &c. It is made of an Oval Lay of Tiles, and three other Oval Layes of crooked Bricks, cemented with our Lute, Platter of *Paris*, and Water: so that the Oval Rounds grow wider, as they rise higher, and that there be in one end of the Oval a double door, for the Ash-hole and Fire-room; then building a square about the said Oval, with broken Tiles and Mortar, add one perfect Round of Bricks, leaving a little gap over against the Fire-room-door; then apply your iron plate, and add two or three Rounds of Bricks more to make the Laboratory; at last, put upon the said iron Plate, Ashes or Sand, an inch thick.

A Wind-Furnace for violent Fusions, is made by building a Furnace of a Circulary Fire, and Suppression, upon the bottom of a Hogshead; in which bottom, there is a hole as big as ones head, which is covered with a Grate, well cemented with Lute and Plaster. The Hogshead must be knocked out at the lower end, and elevated from the ground about half a foot.

Of Spirit of Wine.

TAke as much Brandy as you please; put it into the Copper Vesica, placed in its proper Furnace, fit to it its cover, or *Moors-head*, bordered

dered with its Refrigeratory, then fit to the nose or pipe of the said cover, and to the pipe of Copper, that passes through two Hogsheads full of Water, a little moveable pipe to joyn them together. Light the Fire in the Furnace that serves to distil Aromatick Essences, the Spirit will come in a stream.

This Spirit of Wine is not good to be taken inwardly; if it be not rectified in a glass Cucurbite and Alembick; the first is excellent for burnings, the second is proper to dissolve Gums and Rosins, to take inwardly, and to draw their Tinctures and Extracts.

Of Salt of Tartar.

TAke of Tartar and Niter powdered, equal parts, mingle them, and having put them into a glaz'd earthen Pan; set fire to them with a red Iron, stirring them continually, till the Niter be consumed, and the Tartar calcined. It is aperitive and diuretick. The Dose is, from one to two dragms.

The Regulus of Antimony.

MIngle three pound of Male Antimony, with one pound and an half of common Niter, as much of Tartar, four ounces and an half of powdered

dered Charcoal; put this mixtion by spoonfu's into a pot heated red-hot, in a Furnace of a Circulary Fire, and Suppression, till your pot be full; then encrease your fire, stirring you matter from time to time with a stick, which you must not put to the bottom, till all be melted; then take off your pot, and when it is cold, break it, you will find in the bottom the *Regulus*, and the *Fæces* on the top. Of it, is made *Vinum Emeticum*, everlasting Pills, and Cups; and the Diaphoretick, its *Fæces*, serves to make the Golden Sulphur Diaphoretick.

Of the Liver of Antimony, of which is made the Crocus Metallorum.

MIngle one pound of Male or Female Antimony, with half a pound of common Niter powdered, put them by spoonfuls into a Crucible, or pot of the same Earth, heated red-hot in a Furnace of a Circulary Fire, and Suppression, covering your pot at each spoonful; then encrease your fire, and stir incessantly your matter, with a stick, till it be in Fusion; take off your pot, and pour into a Mortar the melted Liquor, retaining the *Fæces* from going in with it; your matter being cold, is called, *Liver of Antimony*; and being powdered, is called, *The Saffron of Metals*, or *Crocus Metallorum*.

Of it, is made the *Vinum Emeticum*. The Dose is, one ounce in a pint of Wine, of which take one

one or two ounces inwardly, and four or five ounces in a Clyster.

The Spirit and Oyl of Guaiacum.

FIll up to the neck, a great earthen Retort well luted, with shavings, or little pieces of the Wood of *Guaiacum*; place it in a small Reverberatory Furnace, fitting to it a stone Receiver, or a glass one, and covering your Furnace with an earthen Pan, that has a hole in the bottom; then by a moderate heat of twelve, sixteen, or twenty hours; you will have the Spirit and Oyl together, which separate either by a glass Tunnel, or by a coffin of brown Paper, wet with ordinary Water. Of the Ashes or Coals re-calcin'd, you may make a *Lixivium*, and extract the Salt.

This Oyl is good for old Ulcers, for the Gangrene, and Rot; and two or three drops in Cinnamon-water is good for the Collick, the Spirit is good for Burnings, Ulcers, and for the Pox, in a Decoction of *Guaiacum*.

Crystal Mineral.

THrow fine Niter powdered into a Pot, set in a Furnace of a Circulary Fire, and Suppression, and let it be quite full at first; being melted, throw into it four or five times, at each time

time a spoonful of powder'd Brimstone; then pour out by little and little, your melted Niter, into a Brass Kettle, shaking the Kettle, and dipping it into cold Water: dissolve your Niter, thus prepar'd, in warm Water; filter it through a brown Paper, and evaporate it to a *Pellicule*; then setting it cool, you will have fair Crystals, which are the true Crystal Mineral, or *Sal Prunellæ*. It cools, opens, and resists Corruption taken inwardly, from a scruple to a dragm, and in a Clyster, from a dragm to half an ounce.

The Spirit and Oyl of Box

ARe made as the Spirit and Oyl of *Guaiacum*, only this Wood yields much Spirit, but little Oyl: the Oyl is good for the putrefaction, and pain of the Teeth, for Contusions and Ulcers.

Of the Regulus of Mars.

POwder and mingle two pounds of Male Antimony, with one pound of Tartar, and one of common Niter, six ounces of filings of Steel, and two ounces of powder'd Charcoal. It is made as the *Regulus* of Antimony, and there results of it a *Regulus* containing seven ounces of Antimony, with the six ounces of filings. It purges by stool, and vomit, in powder, or in vessel with Wine, and serves to make an excellent Diaphoretick, which never provokes vomit.

The

The Spirit of Salt.

TAke one part of common Salt, and five of Potters Earth, dried and powdered, fill with it a glass Retort well luted, place it in a Furnace of a great Reverberatory Fire; give the fire by degrees, and continue the last degree for twenty hours.

Its vertue is Diuretick, it drives away Gravel, and breaks little britle Stones, whitens the Teeth, and preserves from the Plague, and all Corruption.

Of the Red Precipitate of Mercury.

PUt four ounces of Mercury, and six ounces of *Aqua fortis* in a Matrass of glass luted up to half its Body; place it in a Furnace of a moderate Circulary Fire, till the *Aqua fortis* be evaporated; then give a Fire of Suppression, till there rise a yellow vapour upon the brim of the Matrass; then take it off, and when cold, break your Vessel, and you will find in the bottom a Red Precipitate, of an Orange colour.

Of Spirit of Niter.

Put one part of fine Niter, to four parts of dried Potters-Earth, fill a glass Retort well luted, then distil it in a great Reverberatory Fire, and have a care of its vapours in distilling it.

Its Use and Vertues, Are to dissolve Mercury, Camphire, and Metals, and is better for interiour Remedies than *Aqua fortis*.

Of Turbith Mineral.

Put two ounces of Mercury, and three ounces of Spirit of Niter, into a glass Retort, luted up to half its neck, place it in a Furnace of a Circulary Fire, giving a gentle fire, till the Mercury be dissolved and dried; then take off your vessel, and let it cool, then pour upon it one ounce of Oyl, or Spirit of Sulphur, and evaporate it by the same fire, reiterating this three or four times; then burn upon it Spirit of Wine; break your Vessel, and you will have a white lump: which powder, and wash in warm Water, till the Water come away insipid. Dry this matter in a Sand fire, and burn upon it Spirit of Wine, three or four times, it will make your Mercury as yellow as Gold; then give it a melting fire, which it will endure very well, without losing any thing, be-

caus

cause of the fixedness it has acquired by the Spirit of Sulphur.

Of the white Precipitate.

Put eight ounces of Mercury, and one pound of *Aqua fortis*, into an ample glass Retort with a long neck, shake your vessel, and heat it a little upon warm Ashes, till your Mercury be dissolved; then pour your Dissolution into a glass Bell, and pour upon it a quart of Sea-water, to precipitate your Mercury; separate your Sea-water, and sweeten your Precipitate with common Water, then dry it in a coffin of white Paper. It is used with *Pomatum*, to rub Ring-worms withall.

Its internal Use is, To purge in the Pox, from three to eight grains.

Of the golden Diaphoretick Sulphur.

Boyl in common Water in a Kettle the *Fæces* of Regule of Antimony, or Regule of *Mars*; filter their *Lixivium* through a brown Paper, pour two or three spoonfuls of Vinegar, or of some acid Spirit upon all this *Lixivium*, it will curdle, grow yellow, and stink, then pouring Water upon it, precipitate your Tincture thus curdled, into a powder of the colour of Saffron, which you must edulcorate, or sweeten, to take away the ill smell, then dry it in a coffin of Paper.

Its Use, is to provoke the Monthly Courses, from eight to twelve grains, by whetting its vertue with twice or thrice as much of Sena, Saffron, and Savin, or by receiving the vapour of the *Lixivium*, in sitting over a Close-stool.

Of the Oyl of Eggs.

Put twenty or thirty Eggs into a Kettle of cold Water, boyl it till your Eggs be hard, take out the hard Yolks, and put them into a Frying-pan, over a flaming fire, bruise them, and turn them often with an iron Ladle, till they be almost all turn'd into Oyl, which separate from its *Fæces* while it is warm; you may rectifie it if you please in a glass Retort, in a Circulary Fire, or rather in a Sand-fire, which will make it yellow, and incapable of congealing.

Its Use is, That it is a very good Balsam for green Wounds, Burnings, Ruptures, or falling of the Guts into the *Scrotum*, and for Wounds in the Nerves, Ligaments, and Membranes which are uncovered.

Of the Oyl and Spirit of Ash-wood.

They are drawn as the Spirit and Oyl of Box, and this wood yields but very little Oyl.

Its Vertue is, For pains in the Kidneys, Spleen, Teeth, and for the rotting of Bones, applied outwardly.

Of

Of diſtilled Vinegar.

TAke a glaſs, ſtone, or glaz'd earthen Cucurbite, fill it half full with good Vinegar, place it in a Sand-heat, fitting to it its Head and Receiver; give at firſt a great fire, ſtop the Regiſters and Doors of your Aſh-hole, and Fire-room, continuing your fire, till you have drawn off, within half a pint, all the Vinegar you put in; you may rectifie it upon its *Fæces*, and ſeparate the Flegm, which will come firſt, from the acid Spirit, which will come laſt, half in half, or there-abouts.

Its Uſe is, To diſſolve Pearls, Corals, Fiſh-ſhels, to make of them Magiſteries, and to extract the Salt of Metals.

Oyl of Camphire.

PUt into a Matraſs or Vial two ounces of Camphire, and four ounces of Spirit of Niter, ſhake them together, and let them ſtand till the Camphire be diſſolved: ſeparate by a glaſs Funnel the Oyl which will ſwim upon the Spirit.

Its Uſe is, To moderate the pains of the Nerves that are naked and uncovered in a Wound, and to exfoliate rotten Bones.

Of Spirit of Wine campherized.

Put as much Camphire as you please, into a Matrass, and pour to it as much Spirit of Wine, as shall be three or four fingers above it, fit to it another Matrass, and make a double Vessel: place it in a Sand-heat, till your Camphire be dissolved.

The Use is, For the Tooth-ach, and for Deafness, applied to the Tooth in a little Cotton, and put into the hollow of the Ear, with a little Wool cut off from the Stones of a black Ram.

Of the Aromatick Tincture of Cloves.

Put into a Matrass, as many Cloves as you please, and pour upon them Spirit of Wine, to the height of three or four fingers above the matter; place it in a Sand-heat, till the Spirit be died of a blackish red: separate your Tincture and make of it either an Extract, or a Syrup.

The Use of the Tincture, Is to fortifie the Stomack, and Heart; ease the pains of the Collick kill Worms taken inwardly, and applied outwardly, in form of an *Epithema*.

The calcination of Lead.

Take Lead beaten into thin plates, and Brimstone powder'd, of each equal parts; mal

Strain

Stratum super stratum in a glaz'd earthen Pot; place it in a Circulary Fire, and of Suppression, till your inflamed and burning Sulphur be consumed; take it off from the fire, and stir it with an Iron Rod, then powder it, and searce it.

Its Use is, To dry up old Ulcers, and Scabs, being incorporated with Grease, or Diapompholix, and also from it, is drawn the Sugar of *Saturn:*

The stinking Oyl of Cloves.

Put of Cloves what quantity you will, into a glass Retort luted, place it in a Circulary Fire, there will come into the glass Receiver white fumes, which will congeal into a black Oyl, stinking and caustick.

It serves to exfoliate rotten Bones, it cures the Gangrene and pockie Ulcers.

Of the Oyl and Butter of Antimony, of which is made the Mercury of Life, or Emetick Powder, or of Algarot.

Of the Cinnaber of Antimony.

Of Mercury and Antimony revived.

Put Corrosive Sublimate, and Mineral Antimony in Powder, of each four ounces, into a glass Retort luted, leaving a gap to look in at;

place it in a small Circulary Fire, till all the Oyl be distilled into a glass Receiver, and that you see in the bottom of your Retort, a bright melted lump; then give a fire of Suppression, till your Retort begin to grow soft, and be half melted: break it, there will come out of the neck, Mercury half quick and revived, and half in a blackish powder. In the entry of the neck, you will find a greyish Crust, and in the bottom a lump of Antimony reviv'd, and made crude again; Then put your Oyl of Antimony, which being congealed, is called Butter of Antimony, into a little Retort, to be rectified once only in a small Circulary Fire; throw it into some Water, which being impregnated with the Mercurial Salts, is called the Philosophical Vinegar; pour off this acid Water, and sweeten your white powder with other water, till it come away insipid. This powder is called Mercury of Life.

The use of the Emetick Powder, is, To cause vomiting, and to purge gently in intermittent Feavers, and Dropsies; the Philosophick Water is good for the Itch, Scabs, Ring-worms, and Lice; the Cinnaber of Antimony is a Sudorifick for the Pox.

Of the Oyl and Tincture of Karabe.

FIll a glass Retort, luted up to the neck, with *Karabe* powdered, pour upon it Spirit of Wine, up to the neck too; place it in a Circulary Fire,

Fire, and fit to it a large glass Receiver; give your fire by degrees, till you come to a fire of Suppression, and that there appears no more vapours in the Receiver: separate the Oyl that goes to the bottom, from the Spirit that swims on the top.

The Use of the Tincture of *Karabe*, is, For the Palsie, the Sciatica, the cold Gout, all cold Fluxions, and bruises of the Nerves. The Oyl is good against the suffocations of the Mother, and old Wounds.

Of the Oyl of Jet.

Fill a Retort of glass, well luted, with Jet in pieces, up to the neck; place it in a Circulary Fire, and fit to it a glass Receiver, giving the fire by degrees, as in the Oyl of *Karabe*, and separate the Oyl from the Spirit, that will swim on the top.

The Use of the Oyl, is, For the Suffocation, or Fits of the Mother, for all Contusions and Bruises.

Of the Butter, Cream, or Nutritum of Saturn.

Put into an earthen glaz'd Pan, *Minium*, or *Lytharge*, or *Ceruse*, or calcin'd Lead, as much as you please; pour upon it boyled distill'd Vinegar five or six fingers above the matter; stir it with a woodden *Spatula*; an hour after melt an ounce

ounce of white Wax in an earthen glaz'd Pan, and add to it four ounces of Oyl; pour this mixtion into a Mortar, and upon it a glass full of the said Vinegar of Saturn, stir it, till it be in a consistence of Butter, or *Balsamum*.

The Use of this Balsam, is, To cool, and asswage pain, and extinguish Inflammations; to dissipate and ease the Hemorrhoides.

The Use of the Vinegar of *Saturn*, being dissolved in a small quantity in Water, is, To appease Inflammations, and to serve for Injection in Gonorrhæa's, being mingled with a little Water of Barley.

Of the Oyl of Bricks, or the Philosophers Oyl.

Put five parts of powdered Bricks, and one part of Oyl of Olives, into a glass Retort luted, and bigger than needs for so much matter; place it in a Circulary Fire, which by little and little, you must bring to the highest degree, or Fire of Suppression; the Flegm will come first, then a stinking, thick, red Oyl, which being rectified, will become yellow, clearer, and less stinking.

The Use of this Oyl, is, For Contusions, the Sciatica, and cold Defluxions.

The Oyl of yellow Wax.

POut one part of yellow Wax melted, upon five parts of powder'd Bricks, make with it little Balls, and with them fill a glass Retort, luted up to the neck; give the same Fire, as in the Oyl of Bricks; the Flegm will come first, then a red stinking Oyl, which will congeal into a yellow Butter, which being rectified, will become clear, and white, and less stinking. The Use of it, is the same as of the Oyl of Bricks.

Of the Extract of Hellebore.

PUt half a pound of the Roots of black Hellebore, and upon it as much Spirit of Wine as will cover it three fingers high, into a double Matrass; draw the Tincture in a Sand-fire, for three or four days, evaporate the said Tincture in a glass Cucurbite, in a Sand-fire, to a consistence of Honey.

The Use, is, To purge Melancholly, it causes Loathing and Vomiting. The Dose is, from ten grains to a scruple.

Of Aqua fortis.

PUt into a glass Retort common Niter, and undeflegmated Vitriol in powder, and leaving a third part of your Vessel empty; distil them in a Fire of Reverberation, or Suppression, giving it by

by degrees. A little Flegm will come first, then the Spirit in red vapours.

The Use is, To dissolve Minerals and Metals, and to give force, and penetration to Dyings, or Tinctures.

Of the Infernal Stone.

Put two parts of *Aqua fortis*, to one part of Coppel Silver, cut into little pieces, in a small Matrass half luted; evaporate the *Aqua fortis* in a Circulary Fire, till your matter be dry, with a black scum upon it; then give a melting fire, till there rise no more vapours: then take off your Matrass, and let your matter cool, or else pour it into little moulds.

The Use is, To consume Warts and proud Flesh, to cure Cancres, the Ulcers of the Mouth, and the Gangrene, by touching them with this Stone.

Of the burning Spirit of Honey.

Put one pound of Honey, and a pint of White Wine into a glass Cucurbite, or an earthen one; distil them in a Sand-fire, till you hear that it boyls no longer, and that there remains nothing but a black Honey in the bottom.

The Use is, To dye the Beard and Hair.

Of

Of the Arcanum Corallinum.

POur warm Water upon the Red Precipitate of Mercury, till at laſt your Water come away inſipid, then pour upon it Spirit of Salt, in a glaſs Cucurbite; dry it in a Sand-fire, that will fix the Mercury; then ſweeten with cold Water the ſaid Mercury fixed, till the Water come away inſipid; then reverberate it in a Crucible, it will become as red as Coral; then burn upon it Spirit of Wine, two or three times.

The Uſe of it is, To purge, and provoke vomiting gently, and cure the Pox. The Doſe is, from three to ſix grains.

Cinnamon-Water.

PUt four ounces of Cinnamon, and a quart of White Wine, into a glaſs, or ſtone Cucurbite, fit to it a Head and Receiver of Glaſs, diſtil them in a Sand-fire; there will come at firſt a clear Water, and toward the end, a whitiſh muddy one.

The Uſe of the firſt Water, is, To fortifie the Stomack, and comfort the Heart, and to facilitate, and further the delivery of Women in Childbed. The ſecond Water may ſerve in the confection of the Syrup of Cinnamon, by infuſing the Cinnamon before you diſſolve your Sugar in it.

Of

Of the sweet Sublimate.

TAke of Corrosive Sublimate, and Quicksilver, of each a like quantity, powder your Sublimate in a white Dish, with a Pestle of White-ware, stopping your nose close; then add to it the Quicksilver, and when they are half incorporated together, add a little distilled Vinegar, to make a wet powder; put this mixtion into an unluted Matrass, with a straight neck, place it in a Circulary Fire; after the evaporation of the Vinegar, stop the Matrass with a Paper stopple; continue your fire, till your matter be elevated from the bottom of the Matrass, take off your Matrass, break it, and take out the Sublimate, which cleanse every where: powder it, and put it into a greater Matrass, half luted, to be sublim'd a second time in the same fire, which you must encrease towards the end of the Operation, till there remain little or nothing in the bottom of the Matrass. Take off your Matrass, and break it, and keep this Sublimate in a glass Vessel well stopp'd.

Its Use is, To purge gently, from twenty to forty grains, it fluxes in four or five Doses, one after another.

Of the Salt of Saturn.

PUt as much distilled Vinegar as you please, into a glaz'd Pan, which set upon a Trevet over a fire

a fire of Wood and Coals, and add to it as much as you please of powder'd Lytharge, stirring it with a woodden *Spatula*; then, after it has boyled a little, let it cool, pour off the dittilled Vinegar impregnated, and pour on more; reiterate the boyling, till there remain no Lytharge; filter your Dissolutions, and evaporate them in a Sand-fire, in a glass Cucurbite, till your matter become as red as Blood: then put it into White-Ware Dishes to congeal into white Crystals, as sweet as Sugar, and there will remain a red Oyl, sweet also, which has the same vertue as the Salt.

It is a *Collyrium* for the Eyes in Ophthalmies; it is good to inject in Gonorrhæa's, and it is excellent for redness of the Face, or Erysipelases, in Water, or *Unguentum Rosatum*.

Of the Diaphoretick Antimony.

TAke one pound of Mineral Antimony, or the Regule of Antimony, or *Mars*, four pound of fine Niter, powder them, and mingle them together, and put them in flagration and fusion by spoonfuls, in a great Pot of the Crucible Earth, heated red-hot in a fire of Suppression, covering at each time the Pot; continue the fire till the vapours cease; then take it off, and with a Lattin Ladle, pour out the matter gently into an earthen pan full of Water: bruise between your hands the matter thus quenched. Pour off the white milkie Dissolution, within 2 or 3 hours, pour off the Water of that which is precipitated

to

to the bottom, and sweeten it, till your water come away insipid; then filter your Magistery, and dry it in the shade.

The Use of it, is, That it is a powerful Diuretick, and Diaphoretick against Venereal Diseases, the Small Pox, and all long Distempers. The Dose is, from ten to twenty grains, and more. Boyl four ounces of *Venice* Turpentine into the consistence of *Colophone*, in a kettle full of Water, and mingle with it, while it is warm, an ounce of Diaphoretick Antimony, half an ounce of Niter sulphurated, and as much Cream of Tartar; form of it Pills, which will be excellent for old Gonorrhæa's.

Of the binding Saffron of Mars.

Put two parts of filings of Steel, and one part of powder'd Brimstone, all at once, into a Crucible heated red-hot in a fire of Suppression, till the Brimstone be consumed, and an hour after, take off your Crucible, and powder presently your matter; spread this powder, that is now of the colour of Violets, upon Tiles, and it will become brown.

It is good in bloody and Hepatick Fluxes, in the weight of a dragm; It augments the binding vertue of Plasters.

The

The opening Saffron of Mars.

SPrinkle the binding Saffron of *Mars* in a stone pan, with Spirit of Vitriol, or Brimstone, two fingers above the matter, which in two or three days will be a kind of paste, with which, fill a large Crucible, and set it in a Reverberatory Fire for eight hours, then powder it, while warm, and searce it.

The Use: This Saffron is good against the Yellow Jaundice, it provokes the Monthly Courses, and opens the Spleen, from half a dragm to two.

Of the Spirit of Sulphur.

PLace a stone Cup half full of Sand, upon a little Pot, placed in the middle of a great earthen Pan, a quarter full of Water; put into it a spoonful of powder'd Brimstone, and with a red Cart-nail set it on fire, put presently a glass Bell over the pan, the Brimstone will burn, the Spirit will impregnate the Water, and the Flowers will produce a little skin; reiterate all that, till you have thus consumed four pound of Brimstone; then mingle your Flowers, and your impregnated Water in a Matrass with a short neck, and evaporate in a Circulary Fire the Flegm, till your Brimstone be dissolved, and that your Spirit grows black; pour it all into a stone, or White-

ware Vessel, while it is warm; the Brimstone will be congealed in the bottom, and you shall have half an ounce of black Oyl, or Spirit of Brimstone.

It cools, purifies the Bloud, preserves from the Plague, fixes Mercury, dissolves Pearls and Coral, and cures Cancres, and Warts.

Of the Spirit of Vitriol, and Oyl of Colcothar.

FIll a glass Retort, throughly luted, with green Vitriol calcin'd to a grey colour, in a great Crucible in a Circulary Fire, and of Suppression; place it in a Furnace of great Reverberation, till there appear black spots upon the Receiver; then pour off your Spirit of Vitriol, which is as clear as Water, encrease your fire, you shall have a black Oyl very acid, and there will remain a *Colcothar* in the Retort.

The Use of both is, To cool and resist Corruption, against all Distempers of the Liver, Kidneys, against burning and pestilential Feavers; it serves also, to dissolve Pearls, Coral, Crabs Eyes, Egg-shells, &c. but it is not strong enough to dissolve Metals.

Of

Of the oyl of Mirrha.

FIll with Myrrha in pieces, a glaſs Retort luted; place it in a Circulary Fire, fitting to it a great Receiver; there will come out a Flegm, and an Oyl, both together; ſeparate them one from another, with a glaſs Tunnel.

The Uſe of the Oyl is, Againſt Fits of the Mother by ſmelling to it; it cleanſes and ripens Wounds; being mingled with the *Digeſtivum*, and hinders the Gangrene, being mingled with the *Egyptiacum*.

Of Cauteries.

SLack half a pound of Quick-lime in a ſtone pan, by pouring Water upon it, by little and little, till it become like pap; in the mean time, heat in a Crucible, in a Fire of Suppreſſion, two pounds of gravell'd Aſhes, and throw them hot into the ſaid pap, then pour upon it ſufficient quantity of Water to diſſolve your Salts; after twelve hours iuſuſing, pour your *Lixivium* into a braſs Baſin, and evaporate it till it be dry: and thus, as it is, you may uſe it as people do other Cauteries. If you melt this matter, you may mould Cauteries upon a Marble.

The Uſe is, To cauterize; when they are

moulded, they are dryer, and must be well wet before their application.

Of the Red acid oyl of Antimony.

POwder and mingle fine Niter, Brimstone, and Antimony, of each a pound; set fire to your matters by little and little, in an earthen pan, under a glass Bell, as you do the Spirit of Brimstone; then evaporate it in a Matrass of a short neck, till your Brimstone be melted, and your Niter exhaled, and that your Oyl appears red and thick; taking care that your matter in boyling do not run over; pour all your matter into a little stone pot, or of White-ware, and when it is cold, it will congeal into a fair reddish Sulphur.

The use of the Oyl is, To cure by touching the ulcers and Cancres of the Pox; it purges without provoking vomit, from eight to eighteen drops.

Of Besoard Mineral.

MElt some butter of Antimony, and pour it into a glass Bell, and add to it, drop by drop, and at divers times, Spirit of Niter in equal quantity, for fear of too great an ebullition; when the smoak and boyling cease, pour to it a pint of Sea-water filtred and cold, there will be

be produced a white Precipitate; after twelve hours, pour off this Water, ſweeten your Precipitate with common Water, then filter the remainder through a coffin of Paper, and keep your powder well ſtopp'd.

Its Uſe is, To be an excellent Sudorifick for malignant Feavers, and the Pox.

The Precipitate of Biſmuth.

Put four ounces of powder'd Biſmuth into a glaſs Bell, and pour upon it, by little and little, eight ounces of Spirit of Niter, having a care of too great an ebullition, and of the venemous vapours of the ſaid Spirit. The ebullition being ceas'd, and the diſſolution perform'd, and cold, it will cryſtallize. Pour upon it Sea-water, to precipitate the Magiſtery, pour off your Sea-water, and pour on common Water to ſweeten it, filter the remainder through a Paper coffin, and let it dry in the ſhade.

The Uſe is, To dry Ulcers, and to be a *Fucus* being mingled with *Pomatum.*

The ſpirit and oyl of Turpentine.

Fill a glaſs Retort luted with the wateriſh Spirit of Turpentine, with its Oyl, diſtil it in a Circulary Fire, till three parts of four come away,

which will be the Spirit, and there will remain in the Retort a thick red Oyl; rectifie your Spirit ſo often, till there remain no Oyl in it.

The Oyl is a good *Anodynum* for wounds of the nervous parts; the Spirit is a good Diuretick, diſſolves Gums, extracts Tinctures of Aromatick Plants, and ſerves to make the Balſam of Sulphur.

Of the ſulphurated Niter, call'd Sal Antifebrile, *or the ſalt againſt Feavers.*

TAke four ounces of Brimſtone, or its Flowers, and mingle them with eight ounces of fine Niter; fire this mixtion by degrees in an earthen Cup, ſet in a ſtone Pan, in which is a quart of Spirit of Urine, covering the pot with a Bell; then take the *Fæces* of the calcin'd Brimſtone, and powder them, and mingle them with the Spirit of Urine impregnated with the Spirits of Niter and Sulphur; let them infuſe twelve hours in this ſtone Pot, till they be diſſolved, filter the Diſſolution, and evaporate it in a ſhort necked Matraſs in a Circulary Fire, till it come to a white ſcum; then diminiſh the Fire, and evaporate it, till it ceaſe boyling, and have a care that the too much boyling do not break your Veſſel; pour this matter, while warm, into a White-ware Diſh, and it will congeal like Cry-

ſtal

stal Mineral. To mould it, you must melt it, and then pour it into a Vial, or melt it in the Vial, and then break your Vial by cold Water, and take away all the Glass with the point of a Knife.

The Use: 'Tis a powerful Diuretick and cooler, it resists Corruption, it drives Gravel, cures Feavers, softens Metals. The Dose is, from twenty to thirty Grains.

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